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25th Congress, 3d Session. Doc. No. 21. Ho. of Reps. Treas. Dept.

U.S. Treasury dept,

STEAM-ENGINES.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

Transmitting, in obedience to a resolution of the House, of the 29th of June last, information in relation to Steam Engines, &c.

DECEMBER 13, 1838.

Read, and referred to a Select Committee of seven members.

Printed by the printer of the House, under the superintendence of the Secretary of the Treasury, with authority to make any additions and corrections which may occur to him in the progress of the printing.

TREASURY DEPARTMENT, *December* 12, 1838.

SIR: The House of Representatives, on the 29th of June last, adopted a resolution in the following words:

"*Resolved*, That the Secretary of the Treasury be required to collect and report to Congress, on the first day of the next session, all the information that can be obtained as to the use of steam-engines in the United States, and the accidents and loss of life or property which have attended their use; and especially that he ascertain and report:

1. The whole number of steam-engines in the United States; where and by whom they were constructed; where they are used; how long they have been used; their capacity or power, respectively; and the purposes or uses to which applied; and whether high or low pressure.

2. The explosions or other disasters which have happened to such engines; when and where; with as many of the circumstances attending the same as can be collected.

3. The causes, as far as they can be ascertained, of such explosions or other disasters.

4. The loss or life or property, or injury to persons or property, which has ensued in each case, distinguishing the mode of injury, by burning, scalding, wounding, drowning, or otherwise.

5. The disasters to steamboats, when, where, and how they have occurred, by explosion, collision, fire, or otherwise; the size, capacity, or burden of the boats, their age, and where and by whom built.

6. How such steamboats were manned; and whether intoxicating liquor was served out to, or permitted to be used by, the hands or persons employed on board the same.

Thomas Allen, print.

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7. The names of the owners and masters or commanders of the bo to which such disasters have happened, and of the officers and crews th of.

8. In the case of boats to which no disasters have happened, the be en and size of the same; when, where, and by whom built; and the na es of the owners and masters, or commanders and engineers.

9. Any such other information as may seem to him material."

Steps were immediately taken to procure the information desired, th h it was of a character so extensive and ramified, that the prospect of m h success in so short a time was very unpromising.

As the different districts for the collection of the customs include all e territory of the United States, and most of the steamboats had been bu , and the accidents to them occurred, near the residence of the chief offi s in those districts, the most appropriate and efficient course appeared to e to request those officers to act as agents in obtaining facts on the wh e subject of the resolution. Accordingly, a circular was prepared with view to accomplish that object; and on the 12th of July it was forward to each of them.

Other circulars, besides various letters, have since been sent to such these officers as had made imperfect or no returns of the information r quested. Copies of all the circulars are annexed, (Nos. 1 to 3.) In thos districts where the greatest number of steamboats and other steam ma chinery was supposed to be employed, an authority was given, in a post script to the original circular, to engage additional assistance in collecting the information, so as to secure, as far as possible, a thorough and early return. A copy of the postscript is annexed, (No. 4.)

With a view to procure such other intelligence and opinions as might be useful to Congress in further legislation on the important subject of steam-vessels, and in an especial manner to enable the Department, under the 9th section of the resolution, to offer something which might conduce to the public benefit in preventing accidents in the use of steam, I prepared a letter, on the 28th of August, requesting advice in relation to the causes and preventives of explosions in steam-engines, and in relation to such modifications in the late act of Congress concerning steam vessels, as might appear likely to promote increased security of life and property. It was addressed to several gentlemen of scientific attainments, as well as others possessing practical skill. A copy of it is annexed, (No. 5.)

Other sources of information have been resorted to, some of which, deemed most important, are indicated in the schedule annexed, (No. 6.)

A few of the returns were very imperfect, but have been corrected whenever practicable.

A list of those districts from which no returns, or only partial ones, have been received, is annexed, (No. 7.)

All the returns which have reached the Department have been arranged by States, and according to particular subjects. Those are annexed which contain the description of any engines, and are accompanied by tabular statements, that exhibit the most important facts, under several general heads. The returns are numbered from A 1 to U 22, and the statements from V 1 to V 5. Several replies to the circular letter for the opinions of scientific and practical gentlemen have likewise been received. Some of

are considered valuable, and are annexed, (W 1 to W 7.)

im these, and such intelligence pertinent to the subject as I have been o collect from other sources, the present report has been prepared.

Had further time been allowed, it could have been made more ample, accurate, and useful. The report, in its present state, however, though obviously in some respects imperfect, and occasionally depending on estimates quite conjectural, may lead to the communication of corrections and of several additional facts; so may the receipt hereafter of some returns still in arrear. Should any of these be found very important, I will take the liberty to submit them in a supplemental report.

In the legislation for taking the next census, allow me to suggest that a favorable occasion will exist to make a provision which may ensure the procurement of much very valuable information, of a statistical character, on this subject, without prejudice to various important matters connected with population, commerce, and other interests, which are confided to the supervision of the General Government, and which Congress may then think worthy of attention.

Whole number of steamboats, locomotives, and other steam-engines.

The whole number of steam-engines of every kind in the United States, reckoning one to each boat, is ascertained and estimated to be 3,010. Of these, 2,653 have been ascertained, and 357 are estimated, in places from which the returns are either defective or not received at all. Of this whole number, about 800 are supposed to be employed in steamboats, of which 700 are ascertained and 100 estimated. About 350 are employed in locomotives on railroads. Of these, 337 are ascertained and 13 estimated. The residue, being 1,860, are used in manufactories of various kinds. Of these, 1,616 are ascertained and 244 estimated.

Number of accidents to steam-engines.

The number of accidents occasioning loss of life or much injury to property, which have occurred in the use of steam-engines of every kind in the United States, is computed to have been about 260. Of these, 253 are ascertained, and the rest are estimated. Such accidents, by explosions and other disasters to steamboats, appear to have constituted a great portion of the whole, and are supposed to have equalled 230, of which 215 are ascertained. The first of these, in boats, is believed to have occurred in the Washington, on the Ohio river, in 1816. Explanations are given in the returns as to most cases of this kind, and information as to the rest is obtained from other sources. Annexed is an alphabetical list containing the names of each boat in which the accident occurred, so far as ascertainable, when and where it happened, the kind of engine used, general cause of accident, and the extent of injury to life, (X.) The information obtained as to a portion of the accidents has been imperfect, and at times contradictory. In such cases, the Department has adopted the statements which appeared most authentic, not having time to attain the certainty or accuracy, in every instance, which was desirable, without postponing the report far beyond the period fixed by Congress.

All the certain information, as to the amount of property lost, so far as obtainable, is given in the returns or indicated in the margin. A supplement is added to the table, giving a list of the material accidents in locomotives and other steam-engines in the United States. But these are comparatively, few and unimportant; being only twenty-eight in

ber; and only two in locomotives were by explosion of the boilers. This circumstance is, perhaps, in some degree, to be attributed to the fact that the engineers in locomotives are the most exposed, and have been the most frequent victims, and hence exercise increased care; that little or no irregularities arise from competition; and that the engines rest steadier, and the supply of water is more regular and uniform.

Causes of accidents, and extent of injury to life and property.

In relation to the causes of the injuries in each case, not much is known with accuracy, except what is detailed in the returns, and in the memoranda compiled from them and other sources, and contained in the tabular statement X. From these it will be seen that, of the whole of the accidents ascertained in boats, about ninety-nine were by explosions of the boilers, bursting of some part of the engines, or collapses; twenty-five by shipwreck, from collision, gales, &c.; twenty-eight by fire; fifty two by snags or sawyers; and twenty-four by causes different, or unknown.

The general impression among the most experienced and skilful on these subjects is, that a great part of the boats destroyed by explosions, as well as many lost by fire and other accidents, would have been saved by proper experience, science, and attention on the part of the engineers and commanders. One principal object should be to ensure a thorough reform on this point, where some change for the better appears already to have taken place.

The improvements in the navigation of the Mississippi and Ohio rivers, within the last fourteen years, at the expense of something over three-fourths of a million of dollars, have diminished another immediate cause of many disasters—the running upon snags and sawyers. They will be diminished, also, by the increased cultivation of the banks of the rivers. In respect to explosions, the want of a sufficient supply of water in the boilers is believed to be the most plain, direct, and frequent cause of them.

Great numbers of the explosions have occurred either at landings or soon after leaving them, when the boilers became overheated, and a sufficient height of water was not kept up. Some, however, attribute many of the explosions on those occasions to the immediate and great agitation of the water in the boiler on starting, and the unequal density as well as quantity of steam thus suddenly produced. Most of the other explosions have happened in racing between rival boats, which led to the production of an excess of steam, and to heedlessness in the management of it, or to neglect in furnishing an ample and prompt supply of water. The steam in these competitions has often been increased to two hundred pounds or more on the square inch, instead of the safe and reasonable pressure in common boilers of only from ten to sixty pounds, according to their character or strength; and this great excess has, in numerous cases, been accompanied by a culpable inattention to the height of the water in the boilers.

The number of lives which have been lost by all the disasters in steamboats is computed to have been about two thousand, though some think the aggregate treble that number. I have been able to ascertain only sixteen hundred and seventy-six killed, and four hundred and forty-three

wounded in steamboats; and thirty-seven killed and ninety-eight wounded by accidents to locomotives and standing engines.

The amount of property lost (but for estimating which, with accuracy, no safe data exist) cannot have been less than five or six millions. This would not be more than twenty-five thousand dollars for each boat and cargo, on an average, when the value of the boat alone has sometimes been double that amount.

For the other particulars required in the resolution, such as the precise mode of injury suffered by individuals, whether by drowning, fire, or scalding; the size and age of the boat in which each accident happened; the place where it happened, as well as where the boat was built, and by whom; the name of the master and owner of each, with those of the officers and crew; whether the engine was high or low pressure; and the use of spirituous liquor on board, or not, at the time of the accident; all were sought after, and appear, as far as the information has been obtainable, in the tables and returns before mentioned. (See also some of the documents attached to the report in the House of Representatives, and that from this Department, in May, 1832.) It is true that, in many cases, the information is defective on these points, and several results must be left to future inquiry and to estimates. But, after the former failure, in 1831, to procure, without one or two years' research, information on a single branch of the present inquiry, (see report of the Secretary of the Treasury to the House of Representatives, March 3d, 1831, No. 131, and another May 18th, 1832, No. 478;) and after the unwillingness evinced by many owners of steam-engines to answer questions, and which has formerly as well as lately been a serious obstacle, it is a source of gratification that so much has been effected within a few months, amidst the urgent pressure of so great a mass of other official business on many of the collectors of the customs and on this Department.

In respect to the remaining topics of inquiry connected with the accidents in different kinds of steam machinery, as well as with the boats in which no accidents have occurred, the size and power of each machine of these descriptions, the name of the constructor, the place where built, &c., reference must be had to the supplement to the table X, and to the returns annexed, (A to U.)

Preventions and remedies against accidents.

The inferences will now be briefly stated, which I have deduced from various sources, in respect to the most appropriate preventions and remedies against the various kinds of accidents, in the use of steam-engines, and more especially in the use of steamboats.

The accidents from *explosions* of boilers have arisen, generally, from causes which are stated, in substance, in an able report of a committee of the House of Representatives, in 1832, (No. 478.)

The following are the principal causes:

1st. Faults in the construction of boilers.

2d. Their defective materials.

3d. Their weakness from long use.

4th. Carelessness or want of skill in engineers.

5th. A pressure of steam disproportionate to the ordinary raise the steam the boiler.

6th. Deficiency of water in the boilers; and

7th. Omission to cleanse the boilers frequently.

The preventions or remedies must, therefore, in this class of accidents, be suited, so far as practicable, to remove the causes. The recent act of Congress, by requiring a periodical examination of a certain class of steamboats, furnishes some protection against the first, second, and third causes. But it provides little against the fourth, fifth, sixth, and seventh, except prosecutions against the officers and owners for injuries to life and property. These prosecutions, and the inspections, will be very useful, by way of general prevention of explosions; but ought, in my opinion, to be aided by additional and specific requirements, directing the use of only wrought iron or copper in boilers, exacting frequent cleansing of them from mud, salt, &c., requiring "detectors" and "gauges" as to the quantity of water, height of steam, &c.; limiting the pressure which may, in any case, be raised on the square inch in common boilers, and allowing the employment of no engines which shall not have been examined and licensed by the board of inspectors.

Smeaton and Watt, who made such vast improvements in the principles and the structure of steam machinery, appear to have both been fully aware of the danger resulting from an insufficient supply of water, and they invented pipes and gauges to give seasonable warning of the danger; which, if universally introduced, and rigidly attended to, would prevent numerous disasters.

In the report made by this Department in 1832, as well as in the subsequent proceedings of the Franklin Institute, some very valuable papers on the nature and properties of steam, and the strength of boilers, have been collected, and heretofore submitted to Congress. Having been printed, their details need not be here described or repeated. The experiments now making by the direction of the President of the United States, through a skilful board of gentlemen, selected under a late act of Congress, to test the improvements in inventions for increased safety in steam machinery, are also likely to develop something important, in both a scientific and practical view; but they have not yet advanced so far as to furnish any aid in preparing this report. The accidents from *shipwreck*, caused by gales, fogs, collisions of vessels, or other causes, can seldom be considered as peculiar to the use of steam, or be traced to that cause. They may be diminished in number, however, by some of the provisions more particularly applicable to other cases, and the greater skill, care, and consequent safety ensured by licensed engineers. Their disastrous consequences may also be often mitigated by a special prohibition to use lake and sea-going steam vessels, without life-boats, in addition to those now required by law, and without life-preservers and covered decks. They should likewise be required to have tillers at hand, and spare rudders: the former to be used in case of injuries to the ropes or chains, and the latter in case of injury to the rudder itself. The lights to be carried in the night, under the present law, are also very important in all boats, to prevent disasters arising from collision. The accidents from *fire* are more frequent and calamitous in steamboats than in others vessels. They will require, for prevention and the best, not only the means before enumerated, which are applicable to

The number of proper forcing-pumps, besides the hose, fire-engines, and the boats is compulsory (except in small boats and in narrow rivers) already

the aggregate tre[illegible]ng act of Congress.

sixteen hundred and se[illegible]

The accidents *from snags and sawyers* are common to all boats in certain streams. To steamboats, they have equalled, if not exceeded, all others in the United States, except by explosions; and, to prevent them, will require some addition to the great expense which has already been incurred, to remove obstructions in the large navigable rivers of the West and Southwest, and all the increased skill and care proposed to be exacted from engineers. As the forests are removed rapidly from the borders of the rivers, these obstructions will cease to be renewed. From this analysis, it will be seen that some of the remedies recommended are provided for in the present law of Congress, so far as regards steamboats passing from State to State under custom-house papers. The legislation on this subject has already proved highly useful. Other provisions, as to boats within the jurisdiction of the General Government, can be added, if approved by Congress; while some remedies and some boats belong exclusively to State jurisdiction, and can receive legislative attention only in that quarter. It is believed that the State of Louisiana, in 1834, (if no other State since,) passed a very wise and severe law on the subject of steamboats. I have dwelt longer on these points, as they are supposed to be of the greatest importance in connexion with the resolution, and as legislation has been found necessary in relation to some of them, not only in this country but in England and France. It is not expected, by these means, to render steam as "harmless as it is powerful;" but it is hoped that it will, in time, by due attention, become as manageable, and less destructive to life or property, than any other power equally great and useful.

Recapitulation of the legislation proposed.

For a condensed view or recapitulation of the whole topics of legislation recommended on this subject, whether by the General or State Governments, it may be remarked—

1. That the procurement of increased skill and experience in engineers should, as far as practicable, be secured. Suitable proficiency in these would best be tested by examinations and certificates of qualification being required by law from a board of inspection.

2. That frequent and rigid examinations of the strength of the machinery and the condition of the boats, as to safety, are highly useful, and should be exacted. These examinations ought to be made by men of great science and peculiar ability, having a compensation, while actually engaged, sufficient to command the best services.

3. That steam-gauges of fusible metal and of other approved character, as well as safety-valves, for tests of the quantity or height of the steam, and gauge-cocks, "detecters," "guards," "tell-tales," and any approved indications of the quantity of water in the boiler, are very essential.

4. That fire-engines and buckets, as well as iron tiller-rods, iron chains or wire ropes, and forcing-pumps, with pipes to different parts of the vessel, (the pumps to be worked by hands,) should be provided to each boat; and life-preservers, and small life-boats for each sea-going and lake vessel, if not to all steam vessels. Tillers to manage the rudder, in case of accident to the rods, should always be required to be kept at hand, and a spare rudder in lake and sea-going boats.

5. That a strict prohibition, under any circumstances, to raise the steam beyond a safe pressure on the square inch, viz: in boilers as usually con-

structed, 40 to 60 pounds as a maximum in high pressure, 15 to 20 pounds, or less, as a maximum in low pressure, and 20 to 30 pounds in engines of a medium pressure, partaking of some qualities of both the others, would be very conducive to public security. If the boilers be constructed with increased strength, of course the pressure might be greater without danger.

6. That copper boilers should be required for boats used in salt water; but that in fresh water, the difference between these and iron is not very material in respect to safety, if the iron be wrought and not cast; nor is the difference very material between machines of low and those of high pressure, though the former have usually been considered least liable to accidents.

7. That the boilers be cleansed periodically, or as often as once a month, under heavy penalties, as many explosions have occurred through sediment of salt and other substances collected within the boilers.

8. That all sea-going or lake boats be required to have spar-decks their whole length, instead of open cabins.

9. That all boats, while under way in the night, be required to exhibit lights in some prominent part of the vessel.

10. That severe penalties should be imposed on owners and officers for neglect. Among others, it might be useful to prohibit the recovery of any insurance by them on the boat and her stores, if injured by the bursting of her boilers. Prosecutions should also be invariably instituted by public officers for all injuries to the person or loss of lives occasioned either by neglect or by wanton wrong, without imposing great delay and inconvenience on passengers for that purpose.

Miscellaneous facts as to steam-engines in the United States.

As the addition of a few more statistical facts on the important subject of steam machinery in the United States may be interesting and useful, I have taken the trouble to collect some from the returns, and some from other sources, and present them under the last clause of the resolution, requesting the Secretary of the Treasury to report "any such other information as may seem to him material."

Since the employment of steamboats in the United States, it is computed that quite 1,300 have been built here. Of these, about 260 have been lost by various accidents, as many as 240 worn out, and the rest are now running.

The first steamboat used for practical purposes here, (or indeed in any part of the world,) was in 1807, on the Hudson river, in the State of New York. She was built by Fulton, called "the North River," with an engine of only 18-horse power, and made the passage between Albany and New York in thirty-three hours. Though with a steam-engine manufactured abroad by Boulton & Watt, yet no boat was launched in Europe, that proved successful in practice, till five years after, by Mr. Bell, at Glasgow, in 1812. At that time, the Car of Neptune, built in 1808, the Paragon, in 1811, and the Richmond, in 1812, were all, in addition to the boat first built, running from New York. Rumney is known to have made experiments on a small scale as to steamboats, in Virginia, as early D. 1787; but they were not reduced to any practical use. Both he tch commenced trials in this country as early as 1783 and 1784,

and Oliver Evans in 1785 and 1786. They had been preceded in France, in 1792, by the Marquis d'Jeaffrey, and the idea of applying steam in boats had been suggested in England as early as 1736, by Jonathan Hulls.

The whole number of steamboats ascertained and estimated to be now in this country is 800. In England, in 1836, the whole number is computed to have been 600. On the Western and Southwestern waters alone, near 400 are now supposed to be running, where none were used till 1811, and where, in 1834, the number was computed to be only 234. Of these 400, about 141 are estimated. On the Ohio river alone, in A. D. 1837, about 413 different steamboats are reported to have passed through the Louisville and Portland canal, besides all below and above, which never passed through. But it deserves notice, that of those 413, near 60 went out of use by accidents, decay, &c. within that year; and several of the others, viz: 104, were new, and many of them, probably, were destined to run on other rivers. As an illustration of the rapid increase of business in steamboats on the Ohio, the number of passages by them through the Louisville canal increased from 406, in A. D. 1831, to 1,501, in A. D. 1837, or nearly fourfold in six years. About 70 boats were running, the present year, on the Northwestern lakes, where, a few years since, the number was very small, having been, in 1835, only 25. Of the 800 steamboats now in the United States, the greatest number ascertained to be in any State is 140, in the State of New York. Those in each State, respectively, are enumerated in the table annexed (V 2.)

It is a matter of surprise that so few of these are sea-going vessels, considering that the first steamboat which ever crossed the Atlantic was built in New York, as long ago as 1819, and went from Savannah (the place after which she was called) to Liverpool in 26 days; and that the Robert Fulton, as early as 1822, made several trips to New Orleans and Havana. A similar remark applies to the circumstance that only one of the whole number is a public vessel of war, when the first steam vessel of that kind ever launched was the Fulton, and was built in this country as long ago as A. D. 1815. The Government of the United States never owned but two steam vessels of war—both called the Fulton. The first one was lost, by accident, in 1829; and now there is only the other, before alluded to, built in 1838. It has, however, 13 other steam vessels, employed by the War Department on the public works, and in transportation of troops and stores.

Of the whole number of locomotives in the United States propelled by steam, being about 350, the most which have been ascertained in any State is 96, in the State of Pennsylvania. Those in each State, respectively, can be seen in the table annexed (V 4.)

None of them were introduced here till A. D. 1831, though they now run on nearly 1,500 miles of railroad. The first one, it is believed, was in the State of Delaware, on the Newcastle railroad; the second, in Maryland, on the Baltimore and Ohio railroad; and the third, between New Orleans and lake Pontchartrain, in the State of Louisiana. They had been tried in this country, by Oliver Evans, as early as 1804, and in England as early as 1805; but not reduced to useful practice in the latter till 1811, for freight, and in A. D. 1830 for passengers and speed. One succeeded on a common road, from London to Bath, in 1829. Of the whole number of other steam machines in the United States, (being about 1,860,) the State of Pennsylvania has the most ascertained, being

383. The number in some States is not accurately ascertained; but near 300 more are ascertained and computed to exist in Louisiana alone. The introduction of them here, and especially with the high-pressure machinery, was much promoted by Oliver Evans, about A. D. 1804. The first of them in use in the United States was in A. D. 1787, in the State of New Jersey, for raising water and earth from mines. The next were about 1791, in a cotton-factory at Kensington, near Philadelphia; and soon after in saw-mills, and iron slitting and rolling mills, at Pittsburg. The power has been known in England to be applicable to mechanical uses, since the experiments of the Marquis of Worcester, in 1663. It is claimed by some that he was preceded in France (and a pamphlet published on the subject as early as 1615) by Solomon de Caus. But the views of the latter, like many who preceded even him in the knowledge of steam as a moving power, are supposed to have been rather theoretical than practical. Several machines were made in England as early as 1720; and Watt's first patent was taken out, for improvements in them, as early as 1769. But they were not, even there, very extensively and successfully applied to mills and manufactories till 1785, though 18 large engines were employed in the mines of Cornwall as early as A. D. 1770; and a flour-mill, with 20 pairs of stones, was moved by steam in London in A. D. 1784.

The greatest employment of these in the South is in the sugar manufacture and in cleaning and pressing cotton; in the West, in saw and grist mills, and in various manufactures of iron machinery and tools; and in the East, in mills, in printing, in cotton manufactories, and the public works at navy yards and armories.

The Government of the United States owns 17 of these; they being employed at their navy yards to empty docks, saw timber, &c., and, at some arsenals and armories, in manufacturing arms.

The tonnage of all the steamboats in the United States is computed to exceed 155,473. Of this, 137,473 is in boats ascertained or reported. By the official returns, the whole tonnage would now, probably, equal near 160,000 tons having been, in A. D. 1837, equal to 153,660. Many boats included in those returns have been lost or worn out, and several new ones built since. In England, the tonnage is estimated to have been 67,969 in A. D. 1836. The tonnage to each boat here averages about 200; and the estimates, where the returns have been defective, were made on that basis. The power employed in all steam-engines in the United States is ascertained and estimated at 100,318 horse-power; of this, 12,140 only is in engines, estimated, and not returned. In the aggregate, all this new mechanical force would be equal to the power of 601,808 men. Of this force, 57,019 horse-power is computed to be in steamboats; 6,980 in railroads; and the rest, being 36,319, in other engines. This averages about 70-horse-power to each boat, or one horse to between two and three tons, and less than 20-horse-power to each of the other engines. It is a striking fact, that the steam-power employed, in only standing engines, is equal to about two-thirds of all that is used in steamboats. The largest boat in the United States is supposed to be the Natchez, of 860 tons, and near 300-horse-power, destined to run between New York and Mississippi; the Illinois and the Madison, on lake Erie, next in size, the former being 755, and the latter 700 tons; the *setts, in Long* Island sound, is the next largest, being 626 tons;

and the Buffalo, on lake Erie, next, being of 613 tons. The largest boats passing Louisville, in 1837, were, the Uncle Sam, of 447 tons, and the Mogul, of 414 tons; though below Louisville, the Mediterranean, of 490 tons, and the North America, of 445 tons, on the Ohio, and the St. Louis, of 550 tons, on the Mississippi, are running. The greatest loss of life well authenticated on any one occasion in a steamboat appears to have been by collision, and consequent sinking, in the case of the Monmouth, in A. D. 1837, on the Mississippi river, by which 300 lives were lost. The next greatest were by explosions: of the Oronoka, in 1838, on the same river, by which 130, or more, lives were lost; and of the Moselle, at Cincinnati, Ohio, by which 100 to 120 persons were destroyed. The greatest injury to life by accidents to boats from snags and sawyers appears to have been 13 lost in 1834, in the case of the St. Louis, on the Mississippi river. The greatest by shipwreck, was in the case of the Home, in 1837, on the coast of North Carolina, where 100 persons were lost. The greatest by fire, happened in the Ben Sherrod, on the Mississippi river, in 1837, where near 130 perished. The number of steamboats built in the United States in A. D. 1834 was 88; but in 1837 it was 134, (see table V 2,) or, had increased over 50 per cent. in three years. The places where the greatest number of steamboats, and other steam machines, appear to have been constructed in this country, are Pittsburg, Cincinnati, and Louisville, on the Western waters; and New York, Philadelphia, and Baltimore, on the Atlantic. At Louisville alone, from 1819 to 1838 there appeared to have been built 244 steam-engines; of which 62 were for boats. (See R 8.) The fuel originally used in steamboats in the United States, was wood; but, of late years, bituminous coal has, in many instances, been substituted; and, in several, anthracite coal. The latter, from the small space it occupies, would seem to possess a decided advantage, in sea-going vessels as well as in locomotives.

Some steamboats, made of iron, are believed to be in use in Georgia, if not in other parts of this country, though none of that material have been manufactured here; but it is computed that their cost is less than those of wood, and, as they draw less water with the same freight, they are more useful on shallow streams.

Respectfully,

LEVI WOODBURY,
Secretary of the Treasury.

Hon. JAMES K. POLK,
Speaker of the House of Reps.

LIST OF PAPERS ACCOMPANYING REPORT.

Circulars for obtaining information from public officers, numbered from 1 to 3.
Postscript authorizing the employment of assistants by certain officers in certain cases, No. 4.
Circular to scientific men, No. 5.
List of some special authorities, referred to or extracted from, No. 6.
Districts from which no returns, or only imperfect ones, have been received, No. 7.
Returns from Maine, A 1 to 16.
Vermont and New Hampshire, B 1 to 5.
Massachusetts, C 1 to 30.
Connecticut, D 1 to 13.
Rhode Island, E 1 to 10.
New York, F 1 to 28.
New Jersey, G 1 to 12.
Pennsylvania, H 1 to 20.
Delaware, I 1 to 9.
Maryland, K 1 to 14.
Virginia, L 1 to 21.
North Carolina, M 1 to 15.
South Carolina, N 1 to 9.
Georgia, O 1 to 12.
Florida, P 1 to 10.
Alabama, Q 1 and 2.
Louisiana, and waters of Mississippi, &c., R 1 to 9.
Ohio, S 1 to 8.
Michigan, T 1 to 9.
District of Columbia, U 1 to 22.
Results from foregoing returns arranged in tabular form, according to States and subjects, V 1 to 5.
Answers received from several gentlemen to inquiries made in circulars, W 1 to 7.
Tabular list of accidents, X.

No. 1.

Circular to the respective collectors of customs, and to the surveyors of certain ports.

TREASURY DEPARTMENT, *July* 12, 1838.

SIR: I have to call your especial attention to the inquiries contained in the annexed resolution of the House of Representatives, passed on the 29th ultimo, and to request that you will promptly adopt such measures as you may deem best adapted to obtain the information asked for under each branch of the resolution. As the object is one of peculiar interest to the community at large, it is confidently expected by the Department that no pains will be spared by you to procure as precise information upon the *respective points desired as the* nature of the case will admit.

The information called for under the first and eighth branches of the resolution you will please to give in tables, according to the forms transmitted with this circular.

The information called for under the second, third, fourth, fifth, sixth, and seventh branches of the resolution, will be expected to embrace such accidents only as have occurred within your own district. It is particularly requested that, where accidents have occurred, you will collect as full and precise information as possible of the structure of the machinery used, of the rate at which the boats were proceeding (if under way) when the accidents happened, and of the causes of the explosions and other disasters.

Under the ninth head you will notice any improvements in the construction of steam-engines or steamboats which have been recently introduced, together with any rules or plans for the regulation of said boats or their crews which you may deem useful; also, a statement of such legislative enactments as may appear to you to be necessary on the subject.

I should be pleased to obtain your replies to these respective inquiries as soon as practicable.

I am, very respectfully, your obedient servant,

LEVI WOODBURY,
Secretary of the Treasury.

No. 2.

Supplemental circular.

TREASURY DEPARTMENT, *October* 1, 1838.

SIR: The Department not having yet received from you an answer to its circular of the 12th of July last, in regard to certain information called for by the resolution of the House of Representatives of the 29th of June, 1838, respecting "the use of steam-engines, and the accidents and loss of property which have attended their use," &c., I have to call your especial attention to the subject, and to request that the information may be forwarded immediately to the Department, if practicable.

I am, very respectfully, your obedient servant,

LEVI WOODBURY,
Secretary of the Treasury.

No. 3.

Circular to the officers of the customs.

TREASURY DEPARTMENT, *November* 1, 1838.

SIR: I am required by the resolution of the House of Representatives to make a report on the subject of steamboats, locomotives, &c., on the first day of the ensuing session.

The information expected to be received from you has not yet arrived; you will therefore see the urgent importance of completing and forwarding it immediately, in order to enable me to examine, arrange, and digest it by the 4th of December, so as to comply with the direction of the House of Representatives, by submitting it on that day.

LEVI WOODBURY,
Secretary of the Treasury.

No. 4.

P. S.—Should you find it impracticable to obtain seasonably the information requested, without employing a special agent for the purpose of assistance, you are authorized to select a competent individual for the object, who may be allowed for his services and expenses a sum not exceeding five dollars a day for the time so employed.

No. 5.

Circular in reference to steam-engines and boats.

TREASURY DEPARTMENT, *August* 28, 1838.

SIR: Impressed with the idea that you have devoted much time and reflection to the causes and preventives of the explosions of the boilers of steam-engines, and believing, from your general reputation for scientific acquirements, that you can probably offer some valuable suggestions in regard to this matter, I take the liberty of respectfully asking to be furnished with such views upon it as you may find it convenient to communicate.

This information is desired to assist the Department in answering a resolution of the House of Representatives of the United States, passed the 29th of June last, and is required to be communicated to Congress on the first day of the next session.

I annex a copy of an act passed on the 9th of July last, "to provide for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam;" and should be pleased to have your opinion in regard to its provisions, together with such suggestions in detail as to any legal modifications or additions which you may think would conduce to the greater security of life and property when connected with the employment of steam.

I am, very respectfully, your obedient servant,

LEVI WOODBURY,
Secretary of the Treasury.

An act to provide for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be the duty of all owners of steamboats, or vessels propelled in whole or in part by steam, on or before the first day of October, one thousand eight hundred and thirty-eight, to make a new enrolment of the same, under the existing laws of the United States, and take out from the collector or surveyor of the port, (as the case may be) where such vessel is enrolled, a new license, under such conditions as are now imposed by law, and as shall be imposed by this act.

SEC. 2. *And be it further enacted,* That it shall not be lawful for the owner, master, or captain of any steamboat or vessel propelled in whole or in part by steam, to transport any goods, wares, and merchandise, or passengers, in or upon the bays, lakes, rivers, or other navigable waters of the United States, from and after the said first day of October, one thousand eight hundred and thirty-eight, without having first obtained from the proper officer a license under the existing laws, and without having complied with the conditions imposed by this act; and for each and every violation of this section, the owner or owners of said vessel shall forfeit and pay to the United States the sum of five hundred dollars, one-half for the use of the informer; and for which sum or sums the steamboat or vessel so engaged shall be liable, and may be seized and proceeded against summarily, by way of libel, in any district court of the United States having jurisdiction of the offence.

SEC. 3. *And be it further enacted,* That it shall be the duty of the district judge of the United States, within whose district any ports of entry or delivery may be, on the navigable waters, bays, lakes, and rivers of the United States, upon the application of the master or owner of any steamboat or vessel propelled in whole or in part by steam, to appoint, from time to time, one or more persons skilled and competent to make inspections of such boats and vessels, and of the boilers and machinery employed in the same, who shall not be interested in the manufacture of steam-engines, steamboat boilers, or other machinery belonging to steam vessels, whose duty it shall be to make such inspection when called upon for that purpose, and to give to the owner or master of such boat or vessel duplicate certificates of such inspection; such persons, before entering upon the duties enjoined by this act, shall make and subscribe an oath or affirmation before said district judge, or other officer duly authorized to administer oaths, well, faithfully, and impartially to execute and perform the services herein required of them.

SEC. 4. *And be it further enacted,* That the person or persons who shall be called upon to inspect the hull of any steamboat or vessel, under the provisions of this act, shall, after a thorough examination of the same, give to the owner or master, (as the case may be,) a certificate, in which shall be stated the age of the said boat or vessel, when and where originally built, and the length of time the same has been running. And he or they shall also state whether, in his or their opinion, the said boat or vessel is sound, and in all respects seaworthy, and fit to be used for the transportation of freight or passengers; for which service, so performed upon each and every boat or vessel, the inspectors shall each be paid and allowed, by said master or owner applying for such inspection, the sum of five dollars.

SEC. 5. *And be it further enacted,* That the person or persons who shall be called upon to inspect the boilers and machinery of any steamboat or vessel, under the provisions of this act, shall, after a thorough examination of the same, make a certificate, in which he or they shall state his or their opinion whether said boilers are sound and fit for use, together with the age of the boilers; and duplicates thereof shall be delivered to the owner or master of such vessel; one of which it shall be the duty of the said master and owner to deliver to the collector or surveyor of the port whenever he shall apply for a license, or for a renewal of a license; the other he shall cause to be posted up, and kept in some conspicuous part

of said boat, for the information of the public; and for each and every inspection so made, each of the said inspectors shall be paid, by the said master or owner applying, the sum of five dollars.

SEC. 6. *And be it further enacted*, That it shall be the duty of the owners and masters of steamboats to cause the inspection provided under the fourth section of this act to be made at least once in every twelve months; and the examination required by the fifth section, at least once in every six months; and deliver to the collector or surveyor of the port where his boat or vessel has been enrolled or licensed, the certificate of such inspection; and, on a failure thereof, he or they shall forfeit the license granted to such boat or vessel, and be subject to the same penalty as though he had run said boat or vessel without having obtained such license, to be recovered in like manner. And it shall be the duty of the owners and masters of the steamboats licensed in pursuance of the provisions of this act, to employ on board of their respective boats a competent number of experienced and skilful engineers; and, in case of neglect to do so, the said owners and masters shall be held responsible for all damages to the property or any passenger on board of any boat occasioned by an explosion of the boiler, or any derangement of the engine or machinery of any boat.

SEC. 7. *And be it further enacted*, That whenever the master of any boat or vessel, or the person or persons charged with navigating said boat or vessel, which is propelled in whole or in part by steam, shall stop the motion or headway of said boat or vessel, or when the said boat or vessel shall be stopped for the purpose of discharging or taking in cargo, fuel, or passengers, he or they shall open the safety-valve, so as to keep the steam down in said boiler as near as practicable to what it is when the said boat or vessel is under headway, under the penalty of two hundred dollars for each and every offence.

SEC. 8. *And be it further enacted*, That it shall be the duty of the owner and master of every steam vessel engaged in the transportation of freight or passengers, at sea, or on the lakes Champlain, Ontario, Erie, Huron, Superior, and Michigan, the tonnage of which vessel shall not exceed two hundred tons, to provide and to carry with the said boat or vessel, upon each and every voyage, two long-boats or yawls, each of which shall be competent to carry at least twenty persons; and where the tonnage of said vessel shall exceed two hundred tons, it shall be the duty of the owner and master to provide and carry, as aforesaid, not less than three long-boats or yawls, of the same or larger dimensions; and for every failure in these particulars, the said master and owner shall forfeit and pay three hundred dollars.

SEC. 9. *And be it further enacted*, That it shall be the duty of the master and owner of every steam vessel employed on either of the lakes mentioned in the last section, or on the sea, to provide, as a part of the necessary furniture, a suction-hose, and fire-engine and hose suitable to be worked on said boat in case of fire, and carry the same upon each and every voyage in good order; and that iron rods or chains shall be employed and used in the navigation of all steamboats, instead of wheel or tiller ropes; and for a failure to do which, they, and each of them shall forfeit and pay the sum of three hundred dollars.

SEC. 10 *And be it further enacted*, That it shall be the duty of the master and owner of every steamboat, running between sunset and sun-

rise, to carry one or more signal lights, that may be seen by other boats navigating the same waters, under the penalty of two hundred dollars.

SEC. 11. *And be it further enacted*, That the penalties imposed by this act may be sued for and recovered in the name of the United States, in the district or circuit court of such district or circuit where the offence shall have been committed, or forfeiture incurred, or in which the owner or master of said vessel may reside, one-half to the use of the informer, and the other to the use of the United States; or the said penalty may be prosecuted for by indictment in either of the said courts.

SEC. 12. *And be it further enacted*, That every captain, engineer, pilot, or other person, employed on board of any steamboat or vessel propelled in whole or in part by steam, by whose misconduct, negligence, or inattention to his or their respective duties, the life or lives of any person or persons on board said vessel may be destroyed, shall be deemed guilty of manslaughter, and, upon conviction thereof before any circuit court of the United States, shall be sentenced to confinement at hard labor for a period of not more than ten years.

SEC. 13. *And be it further enacted*, That in all suits and actions against proprietors of steamboats, for injuries arising to person or property, from the bursting of the boiler of any steamboat, or the collapse of a flue, or other injurious escape of steam, the fact of such bursting, collapse, or injurious escape of steam, shall be taken as full prima-facie evidence, sufficient to charge the defendant, or those in his employment, with negligence, until he shall show that no negligence has been committed by him or those in his employment.

Approved July 7, 1838.

DEPARTMENT OF STATE, *July* 9, 1838.

A true copy compared with the roll in this office.

A. VAIL, *Chief Clerk.*

No. 6.

List of some special authorities referred to or extracted from.

1. Stephenson on Civil Engineering in the United States.
2. Reports of Franklin Institute, submitted to Congress by the Treasury Department during the last four years, and one in 1832, on explosion of steam-boilers.
3. Tredgold on the Steam-Engine.
4. Earle on Railroads and Internal Communications.
5. Report of committee of House of Representatives, May 10th, 1832, (No. 478,) and documents annexed, from the Treasury Department.
6. Stuart's Anecdotes on Steam-Engines.

No. 7.

List of districts from which no returns have been received.

In Maryland—Town-creek, Llewellinsburg.
In Virginia—Yeocomico, East river.
In Mississippi—*Pontchartrain, Pearl river, Natchez.
In Louisiana—Madisonville, Teche.
In Tennessee—*Nashville.
The returns are also considered imperfect from the States of Illinois, Indiana, and Arkansas, and from the Territories of Wisconsin and Iowa.

MAINE.

A 1.

COLLECTOR'S OFFICE, *District of Portland and Falmouth, Portland, October* 10, 1838.

SIR: In compliance with the instructions contained in your circular of the 13th July last, accompanied by a resolution of the House of Representatives of the 29th June last, I have the honor herewith to transmit a "return respecting steam-engines used in steamboats," and, also, "of all the steam-engines, exclusive of those used in steamboats and on railroads, within this district, as far as I have been able to ascertain the same; and it is believed these returns embrace all except one in the interior, used in a saw-mill, the description of which I have not as yet been able to obtain, although measures have been taken to that effect. There are none used on railroads. I am not aware of any accident having happened in the boats, manufactories, or mills in which they are used.

I have the honor to be, sir, with great respect, your obedient servant.

JOHN ANDERSON,
Collector.

The Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

* Returns from Pontchartrain and Nashville were received after the report and a portion of the documents had been printed off, and will be found in the addenda.

A 2.

Return respecting steam-engines used in steamboats in the district of Portland and Falmouth, prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employ'd.	Tonnage.		Length from stem to stern.		Breadth at the broadest part.		Depth from spar deck to keel.		Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
		Tons.	95ths.	Feet.	Inchs.	Feet.	Inch's.	Feet.	Inch's.											
Portland -	Between this port and Boston.	445	46	163	6	27	2	10	7	Portland	1835	Nathan Dyer, jr.	The Cumberland Steam Navigation Company.	Robt. S. Boyd.	John B. Coyle and Charles Lawrence.	120	Low	James P. Allaire.	1837	3 years in this boat.
Macdonough	Laid up	313	35	146	3	26	4	8	8	N. York.	1826	Unknown -	Same -	None -	None. -	60	Low	Unknown	1826	Since '26

COLLECTOR'S OFFICE, *District of Portland and Falmouth,*
Portland, October 9, 1838.

JOHN ANDERSON, *Collector.*

List of districts from w

In Maryland—Town-creek
In Virginia—Yeocomico,
In Mississippi—Pontch
In Louisiana—Madison
In Tennessee—Nashv
The returns are also
Indiana, and Arkansas.

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Return of all the steam-engines ...
and on railroads; prepared in ...
comply with a resolution of the House of ...

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.				
City of Portland -	Designated by no particular name.	Simon Cutter -	6	Manufacture of wood	High.		
Do. -	Do. -	Staples & Bartol -	6	Manufacture of iron	Same -	[illegible]	
Do. -	Do. -	Jonathan Sparrow, Ebenez. McLellan.	18	Manufacture of meal and flour.	Same -	1837	[illegible]
Do. -	Do. -	Daniel Freeman -	3	Manufacture of iron	Same -	Unknown	[illegible]
Do. -	Do. -	Josiah Dow & Son	8	In tannery; grinding bark, &c.	Same -	1836	Jonathan Sparrow
Do. -	Do. -	Oliver Dennet -	8	Same - -	Same -	1835	Same -
Do. -	Do. -	Charles Q. Clapp -	1½	In an hotel, pumping water, &c.	Same.		

Collector's Office, *District of Portland and Falmouth,*
Portland, October 9, 1838.

JOHN ANDERSON, *Collector.*

A 4.

COLLECTOR'S OFFICE, *District of Portland and Falmouth,*
Portland, October 24, 1838.

SIR: I have the honor herewith to transmit a further return of steam-engines in this district, together with a copy of a letter from Joseph T. Sherwood, Esq., British consul for Maine and New Hampshire, who was on board the steamers New York and Royal Tar at the time of their destruction, giving the best account of the causes of the loss of those vessels that I am able to obtain.

I have the honor to be, sir, with great respect, your obedient servant,
JOHN ANDERSON *Collector.*

The Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

A 5.

PORTLAND, *October* 22, 1838.

DEAR SIR: I am in receipt of your favor of the 19th instant, requesting an account of the loss of the steamers New York and Royal Tar on this coast, and the causes which led to the destruction of those boats.

Some twelve or fourteen years ago the American steam-brig New York, having been purchased and furnished with new machinery, &c., by a Mr. Bartlett, of Eastport, arrived in this harbor, with an intention of running regularly between Boston, Portland, Bath, Belfast, Castine, and Eastport. As such, I took passage in her for the latter place. Nothing material happened until going up the Kennebec, where she ran on shore, owing, as was supposed, to the machinery not working well. She, however, got off on the next tide, and proceeded to Bath, where passengers were landed and received on board. She then sailed for Belfast; when, in the evening, near Owl's-head, she met the steamer Patent, from Belfast to Portland; both vessels came in contact, the Patent receiving injury, which vessel was taken in tow by the New York, and returned to Belfast, where she remained until about 4 o'clock P. M. the following day, in consequence of disputes in relation to payment of damage; during which time nearly all the passengers left the New York, being fearful of other and more serious danger. The New York touched at Castine, and then proceeded on her way to Eastport, having about 32 souls, in all, on board; and on that evening, between 9 and 10 o'clock, the brig, then being about eight miles to the eastward of Petit Menan light, and the passengers either in their berths or in the cabin, with the exception of a Mr. Thayer of Boston and myself, who were walking the deck, we discovered a glimmering light oozing around the larboard funnel or chimney, and gave the alarm. On looking about for the proper persons whose care it was to see to the machinery and fire, we could discover none, and but two men on deck, viz: at the helm and bows: the latter presumed to be partially, if not wholly asleep. No engineer or fireman was at his post, and but one bucket to be found on deck. The consequence was, that before assistance could be had the fire had got the upper hand; so much so, that the engi-

neer, when found, could not even stop the machinery. No fire-engine, hose, or buckets could be found wherewith to throw a drop of water, the same being left behind, as was then stated. We escaped in the boats, and landed about 12 o'clock at night at the light-house or island, and from thence to the main land.

The loss of this boat, in my opinion, (for it is only an opinion I can give,) may therefore be attributed to the want of care in those whose duty it was to see to such matters, and the storage of dry wood in the fire-room, as well as to the want of protection to the wood-work around the chimney, together with engine, hose, buckets, &c.

The fire undoubtedly communicated with the deck from the great heat in the funnel or chimney.

This vessel had two large boats, in which the passengers and crew made their escape, with loss of baggage, &c.; and lucky, indeed, was it there were no more passengers, otherwise the whole might have been lost for the want of more boats, as the fire raged extremely violent all over the boat, in consequence of her rapid speed through the water dead to windward.

This brief history I have given you so far as my memory serves me, which I believe to be the true cause of the disaster which befell this vessel.

I now come to what I conceive to be the cause of the destruction of the British steamer Royal Tar, of St. John's, New Brunswick, in 1835, by the same element.

The Royal Tar was a fine substantial-built boat, of 300 tons and upwards, with two engines, and well found. She left St. John's in October for Portland, with passengers and a menagerie, leaving all but two of her boats behind, in consequence of the heavy deck lumber, and room required for the wild beasts. After touching at Eastport and Campo Bello, she proceeded on her route to Portland; but the weather becoming boisterous, she put into Little river, where she remained some time, owing to the continuation of the storm. As soon as this abated, she again sailed, with a fair chance of reaching Portland the same night, although it was blowing hard, and the sea running high. When crossing the Penobscot bay, about half-past 12 o'clock, the keepers of the animals began to feed them, which novelty, it is supposed, drew the attention of the engineer and firemen in charge from their duty, and, by some means or other, (probably by the blowing off of steam by a fireman too frequently,) the water became low. Be this as it may, about 1 P. M. it became necessary to anchor the boat for the purpose of cooling the boilers previous to being filled with water. In the mean time the fires were put out, as supposed; but which turned out to have been of little use, inasmuch as she was afterwards found to be on fire under the deck and over the boiler. This was played upon by the force-pump and hose; but unfortunately this pump was placed in the very place it ought not to have been, viz: in the fire-room, which, with the fire and smoke, the men were prevented from working any time, and thus this became useless. The fire, in the mean time, coming up the hatch of the engine-room, there was no hope of saving her. The passengers then became alarmed, and took to the boats, two in number; sixteen of whom pushed off the largest for the shore; the other, the captain, on coming on deck from the fire-room and perceiving what *was going on,* secured; his doing which was the means of saving all

those who were rescued, by lying near the boat and picking up those who could swim to her. In the mean time, those on board the steamer slipped the cable and made sail for the nearest island; the wind still blowing a gale from the northwest, and the fire increasing, soon burnt the sails and rigging, and the boat became unmanageable.

By this time a schooner was perceived among the islands coming towards the boat, when the captain in the small boat pulled towards her, fearing she might alter her course. Hats, &c., were waved and answered. On the approach of the schooner, she proved to be a small cutter from Belfast, attached to Castine. The captain of the steamer then boarded her, and put on board all the persons whom he had rescued, and immediately returned to the steamboat for others, which by this time was entirely enveloped with one sheet of flame, and people leaving her in all directions. He succeeded in saving, by frequent trips, all who were saved; and had the cutter's boat been of service, many others might have been rescued; as it was, she was too small for that or any other purpose of the like nature.

After every thing had been done which could be done, the cutter left the steamer and proceeded to the isle Holt, and there landed the surviving passengers and crew, from whence they scattered.

The loss of this boat may therefore be attributed mainly to the attention of the engineer and firemen being attracted from their duty by the novelty of seeing the animals fed, &c., and their carelessness in allowing the steam to get down.

I am, dear sir, with great respect, your very obedient humble servant,

JOS. T. SHERWOOD.

Hon. JOHN ANDERSON,
Collector of Customs, &c., Portland, Me.

Return of steam-engines in use in the district of Portland and Falmouth, exclusive of those used in steamboats and vessels; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Durham -	Durham steam-mill -	Incorporated company, (name unknown.)	35	Manufacture of wood, &c.	High -	1838	Saml. Scammon, Waterville.	About two weeks.	The machinery to be propelled not fully completed.
Gorham -	Gorham powder-works	Same* - -	3	Manufacture of powder.	High -	Unknown	Some person in Boston.	About two years.	

* Supposed to be Whipple and Company.

COLLECTOR'S OFFICE, *district of Portland and Falmouth,*
Portland, October 22, 1838.

JOHN ANDERSON, *Collector.*

A 7.

COLLECTOR'S OFFICE,
District of Bath, (Maine,) September 21, 1838.

SIR: I have the honor to enclose returns of all the steam-engines in use in this district, as required by your circular instructions of the 12th of July, 1838.

I also forward the answers of Captain Kimball to certain inquiries respecting the steamboat New England, which was lost in May last; which answers contain all the information I can obtain relative to the loss of that boat.

I am, most respectfully, sir, your obedient servant,

J. SEWALL,
Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of steam-engines used in steamboats in the district of Bath, Maine; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
		Tons. 95ths.	Feet. Inchs.	Feet. Inchs.	Feet. Inchs.			
Augusta - -	Between Hallowell and Boston	218 56	151 6	19 10	7 6	New York	1838	C. Vanderbilt.
Huntress - -	Between Gardiner and Boston	333 15	172 0	23 6	9 6	Do. -	1838	Lawrence & Sneeden.
Minerva - -	On the Kennebec - -	54 11	87 6	17 6	3 10	Vassalboro'	1838	E. G. Pierce.
Kennebec - -	Between Pittston and Gardiner	109 36	81 0	25 3	6 3	Pittston -	1837	E. Hinds.
Sagadahock - -	Bath - - -	70 00	67 0	17 0	7 0	Bath -	1837	S. Patten.

A 8—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
C. Vanderbilt - -	A. Brown - - -	W. Birt and S. Porter -	90	Low -	W. Hall - -	1838	About 6 wk's
New London and Norwich Steamboat Company.	N. Kimball - -	J. D. Savage, 1st; C. Moores, 2d	130	Low -	J. Cunningham -	1838	3 months.
N. Faunce & others -	N. Faunce - - -	E. Harmon - -	16	High -	E. Champney -	1838	
W. Stevens 2d, & others	H. T. Franklin - -	J. W. Hilton - -	12	High -	Holmes & Robbins	1837	
Sagadahock Ferry Comp y	W. Morse - - -	W. Morse - -	30	High -	Holmes Hinkley -	1837	

Return of all the steam-engines in use in the district of Bath, Maine, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or factory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When engine constructed.	By whom constructed.
Pittston	Chair and bedpost factory	James H. Jones	4	Manuf'g chairs & bedposts	High	1837	Holmes and Robbins.
Pittston	Pittston steam sawmills	W. Bradstreet, J. Bradstreet and others.	2 engines, 25 each	Manuf'g boards, shingles, &c.	Do.	1835	Holmes Hinkley.
Gardiner	Holmes and Robbins's iron foundry.	Holmes and Robbins	6	Manufacturing pig iron	Do.	May 1836	James M. Pond.
Hallowell	Hallowell steam sawmills	Wheeler and Perkins	2 engines, 25 each	Manuf'g boards & shingles	Do.	Oct. 1835	Holmes Hinkley.
Hallowell	Fulton steam-mill	A. & C. Cunningham, and F. Bachelder.	2 engines, 25 each, 1 of 16.	Manuf'g boards, shingles, &c.	Do.	1837 and 1838	Holmes Hinkley.
Hallowell	Steam flour-mill	B. Nason, A. Thing, J. Fuller, and Atherton.	30	Manuf'g flour and meal	Do.	July 1838	Freeman & McClinch.
Hallowell	Hallowell machine shop	Freeman and McClinch	3	Finishing iron	Do.	Dec. 1833	C. Freeman.
Hallowell	Hallowell foundry	John P. Flagg	6	Manufacturing pig iron	Do.	1834	Ashtraft.
Hallowell	Hallowell chair factory	John Brown	3½	Manuf'g chairs & bedposts	Do.	1837	Freeman & McClinch.
Augusta	Augusta foundry	Allen Lambert	10	Manufacturing pig iron	Do.	July 1836	Holmes Hinkley.
Bath	Lincoln foundry	W. V. and O. Moses	6	Iron foundry	Do.	1835	Holmes Hinkley.
Brunswick	Brunswick foundry	George Earle	6	Iron foundry	Do.	1836	James M. Pond.
Bath	Mars's machine factory	A. W. Mars	3	Making machinery	Do.	1837	Jonathan Sparrow.
Bath	Jewell & Henry's mills	Jewell, Henry, & Co.	2 engines, 25 each	Manufacturing boards, &c.	Do.	1837	Holmes Hinkley.
Bowdoinham	Bowdoinham S. M. co.	W. Purington & others	2 engines, 25 each	Do. do.	Do.	1837	Do.
Bath	J. & C. Sewall's mills	J. and C. Sewall	10	Do. do.	Do.	1837	Do.
Bath	North steam mill	B. Robinson & D. Baker	25	Do. do.	Do.	1837	Do.
China	China S. M. company	China S. M. company	20	Grinding wheat, &c.	Do.	1836	Do.
Vassalboro'	Dow's mill	F. Dow	5	Bark mill	Do.	1837	Do.

COLLECTOR'S OFFICE, *District of Bath, (Maine,) Oc'. 6, 1838.*

J. SEWALL, *Collector.*

Doc. No. 21.

A 9.

CUSTOM-HOUSE,

District of Bath, (Maine,) July 20, 1838.

SIR: To enable me to comply with instructions from the Secretary of the Treasury calling for information as to the use of steam-engines in the United States, and the accidents and loss of life or property which have attended their use, I have to request that you will be pleased to annex and furnish me, as soon as possible, your answers to the following inquiries:

What was the tonnage of the late steamboat New England? [Answer. 300$\frac{3}{95}$ tons.]

Her length from stem to stern? [Answer. 163 feet 6 inches.]

Breadth at the broadest part? [Answer. 23 feet 8 inches.]

Depth from spar-deck to keel? [Answer. 8 feet 1 inch.]

Where built? [Answer. At New York.]

When built? [Answer. In 1833.]

Names of the masters or commanders? [Answer. Nathaniel Kimball.]

Names of engineers of said boat? [Answer. George Mesnard and Lewis Keen.]

Power of her engine, in horses? [Answer. One hundred and sixty.]

High or low pressure? [Answer. Low pressure.]

By whom was engine constructed? [Answer. West Point Foundry.]

How long in use? [Answer. Three years.]

When and where said steamboat was lost? [Answer. 15 miles east-southeast of Boon island, May 31, 1838.]

The causes of said loss or disaster, with as many of the circumstances attending the same as you can state? [Answer. By coming in contact with a schooner from Thomaston to Boston, loaded with lime, by the name of Curlew.]

Amount of property lost? [Answer. Estimated at forty thousand dollars.]

Number of lives lost, and how lost, by drowning or otherwise? [Answer. One jammed to death between steamboat and schooner Curlew.]

How said steamboat was manned? [Answer. By a good and sufficient crew, hired by the month.]

Names of the pilots and crew? [Answer. Soloman Blanchard, 1st pilot, George Stilphin, 2d pilot, Jason Collins, William Rush, Andrew McCausland, and William Griffin, firemen; William L. Stone, clerk; A. F. Goodwin, James Stone, Joseph Crowell, and A. B. Frost, deck-hands; James Collins, wheelsman.]

Be pleased to add such suggestions as you may deem useful, relative to the improvement of the construction of steam-engines or steamboats, or for the regulation of said boats or their crews.

Very respectfully, sir, your obedient servant,

J. SEWALL, *Collector.*

Captain NATHANIEL KIMBALL,
Steamboat Huntress.

A 10.

COLLECTOR'S OFFICE,
District of Belfast, October 7, 1838.

SIR: Accompanying this, you will receive the following returns from this district, viz: return of steam-engines used on railroads; return of all the steam-engines in use in this district, exclusive of those used on railroads.

There is no steamboat owned in the district, and no disasters have happened to any steamboat or steam-engine in the district.

I am, sir, most respectfully, your obedient servant,

NATHANIEL M. LOWNEY,
Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

A 11.

Return of the steam-engines in use in the district of Belfast, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
								Years.
Hampden -	Penobscot steam-mill No. 1	Hazen Mitchell -	45	Sawing lumber - -	High	1835	Portsmouth Foundry Co. -	3
Hampden -	New York steam-mill -	Thomas Emery and Barnabas Barton.	30	Sawing lumber - -	High	1835	Paul A. Labbastan, of N. York.	3
Bangor -	Bangor steam-mill -	J. B. Fisk - -	12	Making flour and meal -	High	1836	West Point Foundry Co. -	2
Belfast -	Waldo furnace - -	F. A. Lewis -	6	Casting stoves, &c. -	Low	1837	Hinkley - - -	1
Frankfort -	Saw-mill - -	Eben'r S. Coffin & al.	40	Sawing lumber - -	High	1835	Hinkley, of Boston -	3

COLLECTOR'S OFFICE, *District of Belfast, October* 5, 1838. N. M. LOWNEY, *Collector.*

A 12.

Return of steam-engines used on railroads in the district of Belfast, prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
				Year.			
Bangor and Piscataqua	Pioneer and Number Six	20	High	1836	Rob't Stephenson, of Newcastle, (England.)	Since Nov. 25, 1836	Road is about 12 miles long.

COLLECTOR'S OFFICE, *District of Belfast, October* 1, 1838. N. M. LOWNEY, *Collector.*

A 13.

Return of all the steam-engines in use in the district of Wiscasset, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill, or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	How long in use.	By whom constructed.	Remarks.
Wiscasset	Clarks and Co.	Nathan Clark, jr. Henry Clark, Franklin Clark, & James Stinson.	40	Manufacturing of lumber and grain.	High	1835	3 years	Holmes Hinkley	No accident, or loss of property.
Edgecomb	Edgecomb	David Jackins, jr., and Arthur Bodge.	16	Manufacturing of lumber -	High	1837	1 year	Do.	No accident, or loss of property.

P. S. Steamboats, none in the district.

COLLECTOR'S OFFICE, *District of Wiscasset, October* 1, 1838.

JOHN D. McCRATE, *Collector.*

A 14.

Return respecting steam-engines used in steamboats in the district of Waldoboro'; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Name of master or commander.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			ft. in.	ft. in.	ft. in.											
Damariscotta	Hauled up	67 53	70 8	17 6½	6 1	Jefferson	1837	E. Haskell	Not enrolled.	N. Mayhew.	W. Thompson.	45	High	Holmes & Robbins.	1837	2 mths.

COLLECTOR'S OFFICE, *District of Waldoboro', Sept.* 15, 1838. DENNY McCOBB, *Collector.*

A 15.

CUSTOM-HOUSE, PASSAMAQUODDY, *July* 30, 1838.

SIR: You will receive herewith a return of steam-engines in use in this district, made in obedience to your circular of the 12th instant. The engine described in this return is the only one of any description in this district.

I am, with great respect, sir, your obedient servant, S. A. MORSE, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury, Washington.*

A 16.

Return of all the steam-engines in use in the district of Passamaquoddy, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Eastport -	Eastport Saltworks Company.	Loring F. Wheeler & al.	4	Raising salt water.	High	Unknown	Unknown	4 years	Imported from England in 1832, and owned by an incorporated company.

COLLECTOR'S OFFICE, *District of Passamaquoddy, July* 30, 1838.

S. A. MORSE, *Collector.*

NEW HAMPSHIRE.

B 1.

COLLECTOR'S OFFICE,
District of Portsmouth, Nov. 14, 1838.

SIR: I have the honor to transmit, herewith, to the Department, a return of steam-engines in this district, in conformity to your instructions of 12th July last.

There are, doubtless, other steam-engines in New Hampshire; but as it has been out of my power to collect the necessary information respecting them, without incurring an expense not authorized by the Department, I have confined my inquiries to those in Portsmouth, and in the neighboring towns in which I knew steam-engines to be located, and to the only steamboat enrolled in this district.

With the highest respect, I am, sir, your obedient servant,

DAN. P. DROWN,
Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

B 2.

Return of all the steam-engines in use in the district of Portsmouth, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill, or manufactory.	Names of owners.	Power of engine, in horses.	For what purposes used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Portsmouth -	Franklin iron foundry	F. I. F. Co.	8	Propelling bellows - - -	Low	1837	Portsm'th Iron Foundry, Company.	2½ y'rs.
Do. -	Portsmouth iron foundry.	P. I. F. Co.	12	Propelling bellows, and machinery for drilling and turning iron.	High	1835	Holmes Hinkley, Boston.	4 "
Do. -	Portsmouth steam factory.	P. S. F. Co.	6	Propelling machinery, hosiery manufactory.	High	1833	Bush & Muhlenburg, Philadelphia.	4 "
Exeter -	Exeter manufactory -	E. M. Co. -	40	Propelling machinery for manufacturing cotton sheeting.	High	1837	Thomas Ashcroft, Boston.	2 mths.
Dover -	Cocheco works -	Cocheco Co.	30	Pumping water - - - -	Low	1833	– –	5 y'rs.
New Market -	N. Market iron foundry.	N. M. I. F. Co.	6	Propelling bellows - - -	High	–	Holmes Hinkley	3 "

CUSTOM-HOUSE, COLLECTOR'S OFFICE,
Portsmouth, (N. H.,) November 14, 1838.

DANIEL P. DROWN, *Collector.*

respecting steam-engines used in steamboats in the district of Portsmouth; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			ft. in.	ft.in.	feet.											mo's.
Portsmouth	Betw. Portsm'th and Boston.	215 87	140 10	20 2	8	Salem,Mass.	1837	Barker and Grant.	L. Barnes and others.	S. M. Tripe	D. Morse	80	Low	J. Babcock	1837	10

CUSTOM-HOUSE, COLLECTOR'S OFFICE,
District of Portsmouth, November 14, 1838.

DANIEL P. DROWN, *Collector.*

VERMONT.

B 4.

CUSTOM-HOUSE, BURLINGTON, VERMONT,
October 9, 1838.

SIR: Herewith is a return of so much of the information as is required by the 1st and 8th branches of the resolutions of the House of Representatives of the 29th of June last, as relates to engines used for propelling vessels in this district. We have no railroads, and, of course, no locomotives. Water-power being so abundant in this district, steam is seldom, if at all, used for any other purpose than for propelling vessels. There has but one accident happened to a steamboat in this district, and that was from fire. The steamboat Phœnix, in the summer of 1819, on her trip from Whitehall to St. John's, off Colchester point, was entirely destroyed by fire. The fire was first discovered in the pantry; but how it originated, never could be discovered. On this occasion, seven or eight lives were lost, all belonging to the crew, the passengers being all saved. It cannot now be ascertained whether intoxicating liquors were used by the crew or not. I have but one suggestion to make, that is, that a rule adopted very early by the owners of steamboats in this district, never to employ a person addicted to intoxication in any department of their vessels, is the main reason of so few accidents.

With great respect, your obedient servant,

ARCHD. W. HYDE,
Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington, D. C.

H 5.

In respecting steam engines used in steamboats in the district of Vermont; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar deck to keel.	Where built.	When built.	By whom built.
		Tn. 95ths.						
Burlington	Lake Champlain	405 00	186 ft. 0 in.	25 ft. 0 in.	9 ft. 0 in.	Shelburn, Vt.	1837	Lavater S. White
Winooski	Do.	226 81	136 0	20 6	8 6	Do.	1833 3	Do.
Washington	Do.	133 92	92 0	20 7½	7 9	Essex, N. Y.	1837	Elijah Phillips.
Macdonough	Do.	137 73	89 9	20 6	6 3	St. Alban's, Vt.	1838	Charles Sampson.

H 5—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engines constructed.	How long in use.
Champlain Trans. Co.	Richard W. Sherman	James McIntyre	150	Low	Ward & Co.	1837	1 year.
Do.	Dan Lyon	Giel Lyman	60	Do.	M. Battle	1833	5 years.
Do.	William Anderson	Samuel Miller	30	Do.	Langdon & Co.	1828	10 years.
Do.	William P. Phillips	Lathan Jones	30	Do.	J. D. Ward & Co.	1828	10 years.

COLLECTOR'S OFFICE, *District of Vermont,*
Burlington, October 9, 1838.

ARCHIBALD W. HYDE, *Collector.*

Return of all the steam-engines in use in the district of Boston, Charlestown, &c., exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
								Years.
East Boston -	East Boston Sugar Refinery	E. Boston S. Refinery	30	Refining sugar - -	Non-condensing.	1834	Horsley Iron Co., Birmingham.	3
	Machine Shop - -	Seth Wilmouth -	6	Turning wood and iron -	High pres.	1837	Seth Wilmouth -	1
	Do. - -	Do. - -	6	Pumping water - -	Do.	1834	Steam-engine Co., Prov.	3
	Bartol's Machine Shop -	Do. - -	6	Driving lathes - -	Do.	1837	Bartholomew, N. York -	1
Boston -	Gas-light Company -	Gas-light Co. -	2	Pumping water - -	Do.	1837	Lane, Lowell - -	1
	Exetor Factory - -	Fessenden & Hard -	6	Turning iron, &c. -	Do.	1834	Holmes Hinckley -	4
	Warren Iron Foundry -	Haskell & Turner -	10	For melting and turn'g iron	Do.	1834	Wadleigh & Badger -	4
	Trull's Distillery - -	Ezra Trull - -	15	Grinding grain, and pumping	Do.	1836	Holmes Hinkley -	2
	Distillery - -	Hard & Welsh -	6	Pumping - - -	Do.	1835	Do. - -	3
	Distillery - - -	A. S. Holmes -	4	Do. - - -	Do.	1837	Adams - - -	1
	Brass Foundry - -	H. N. Hooper & Co.	8	Turning - - -	Do.	1832	A. S. Dawley - -	6
	Distillery - - -	A. H. Bowman -	6	Pumping - - -	Do.	1835	Holmes Hinkley -	3
	Distillery - - -	Barnard J. Trull -	7	Do. - - -	Do.	1837	Do. - -	1
	Distillery - - -	David Barnard & Co.	6	Do. - - -	Do.	1837	Do. - -	1
	Soap-stone Manufactory -	Cowdin - -	5	Sawing - - -	Do.	1834	L. Keene - -	4
	Last Manufactory - -	Wight - -	5	Turning wood - -	Do.	1836	Do. - -	2
	Box Manufactory - -	Oaks Tirrell - -	4	Sawing and planing -	Do.	1835	Goulding - -	3
Roxbury -	Bone Mill - -	Nahum Ward -	12	Grinding bones - -	Do.	1837	Pond - - -	1
	Morocco Manufactory -	John Hunt - -	8	Pumping & splitting leather	Do.	1836	A. S. Dawley - -	2
	Tannery - -	R. Winslow - -	6	Grinding bark - -	Do.	1833	Alger - - -	5
	Roxbury Cordage Manuf. -	John Webber & Sons	20	Manufacturing cordage -	Do.	1835	Wadleigh, Badger, & Co.	3
	Roxbury Cordage Manuf. -	Do. - -	10	Do. do. - -	Do.	1838	Seth Adams - -	New.

C 3 - Continued.

Place.	Name of mill or manufactory.	Names of owners	Power in horses.	For what purpose used	High or low pressure.	Year when erected.	By whom constructed	Number of years in use.
Roxbury	Boston Lead Company	Boston Lead Co.	30	Manufac. sheet lead, lead pipes, and painters' lead	High pres.	1831	Ashcroft	7
	Boston Lead Company	Do.	30	Spinning hemp	Do.	1839	Mill dam Foundry	8
Boston	Argus Manufacturing Co.	Argus Manuf. Co.	14	Pumping and grinding bark	Do	1840	Adams	5
Roxbury	Tannery	Charles Davis	12	Manufacturing cordage	Do.	1841	Mill dam Foundry	5
Boston	Cordage Manufactory	J. W. Lewis	16	Do.	Do.	1844	Hinkley & Co	4
	Cordage Manufactory	Do.	6	Turning wood	Do.	1844	Do	4
Roxbury	Box Factory	Asa Clapp	4	Fulling hides & grind'g bark	Do.	1841	Do	4
	Tannery	Guild, White, & Co.	8	Driving machinery	Do.	1845	Do	3
	Roxbury Chemical Co.	Roxbury Chemical Co.	15	Spinning hemp	Do.	1849	Mill dam Foundry	0
	Norfolk Laboratory Co.	Norfolk Laboratory Co	6	Turning grindstone	Do.	1850	Holmes Hinkley	0
	Cordage Manufactory	Sewall Day	12	Manufacturing bale-rope	Do.	1837	Do.	1
	Edge tool Manufactory	Hobbs	6	Grinding grain	Low pres	1837	Graham	1
	Bale rope Factory	Daniel Perkins	25	Driving machinery	High pres.	1837	John Goulden	1
	Grain Mill	Stearns & Jones	50	Manufacturing bale-rope	Do.	1837	Do.	1
	Roxbury India Rubber Co.	Roxbury I. Rubber Co.	24	Grinding grain	Low pres	1837	Holmes Hinkley	1
	Roxbury Fur Factory	J. Prescott & Sons	7	Driving machinery	High pres.	1835	Do.	2
	Cordage Factory	Moses Day & Co.	10	Cleansing skins	Do.	1837	Do.	1
Boston	Machine Manufactory	Adams & Hammond	6	Manufacturing cordage	Do.	1835	John Goulden	2
	Machine Manufactory	Walleigh & Badger	10	Blowing and turning	Do.	1838	Dawley	2
	Last Manufactory	Collins & Stevens	6	Blowing, drilling, and turn'g	Do.	1835	Walleigh & Badger	2
	Machinery	Otis Tufts	4	Turning wood, &c.	Do.	1837	James M. Pond	1
	Iron Foundry	M. Cornell	16	Blowing, turning, &c.	Do.	1837	Otis Tufts	1
	Marble Manufactory	J. Templeton	14	Do.	Do.	1844	Holmes Hinkley	4
	Machinery	Thomas Ashcroft	4	Sawing and polishing marble	Do.	1831	Do.	4
	Fulton Iron Foundry	Geo. G. Thatcher	8	Blowing bellows, &c.	Do.	1839	Thomas Ashcroft	0
	Hoeing and Printing Press.	J. & Seth Adams	7	Melting iron	Do.	1839	Holmes Hinkley	0
	South Boston Iron Co.	G. Alger & Co.	20	Turning iron and wood	Do.	1838	Seth Adams	0
	South Boston Iron Co.	Do.	20	Blowing bellows, &c.	Do.	1850	Alger	0
	South Boston Iron Co.	Do.	10	Turning and drilling	Do.	1850	Do.	0
				Do.	Do.	1851	Do.	0

	Barrel Manufactory -	S. Nickolson -	8	Dressing staves - -	Do.	1829	Holmes Hinkley -	9
	Chain-cable Manufactory -	Cotton, Hill, & Co. -	18	Manufacturing chain-cables	Do.	1837	J. & Seth Adams -	1
	Boston Cork Co. - -	Boston Cork Co. -	6	Driving machinery -	Do.	1835	Goulden - -	3
	Steam-engine Manufactory	Hinkley & Drury -	8	Turning, drilling, &c. -	Do.	1836	Holmes Hinkley -	2
	Box Manufactory - -	Isaac Tirrel - -	3	Sawing, &c. - -	Do.	1833	Do. - -	5
	Planing Mill - -	R. Urann - -	30	Sawing and planing -	Do.	1831	Sabbatam, New York -	7
	Machine Shop - -	James M. Pond -	8	Forging and turning iron -	Do.	1835	James M. Pond -	3
	Mt. Washington House -	Warren Association -	6	Washing, &c. - -	Do.	1835	Seth Adams - -	3
	Pearl Street House -	P. Shepard - -	3	Do. - - -	Do.	1837	Keene - - -	1
	Machine Shop - -	Wm. B. Dodge & Co.	4	Turning and sawing -	Do.	1835	E. Bartholomew -	3
	Piano Forte Manufactory -	T. Gilbert & Co. -	8	Turning, sawing, &c. -	Do.	1837	Otis Tufts - -	1
	Lamp Manufactory -	Wm. Carlton -	5	Turning, &c. - -	Do.	1834	M. Baldwin, Philadelphia	4
	Morning Post Print. Office	Beals & Greene -	2	Working press -	Do.	1838	Otis Tufts - -	New.
Malden -	Coloring Factory - -	W. & C. Baldwin & Co.	6	Working machinery -	Do.	1836	Hill, of Salem -	2
	Last Factory - -	Samuel Cox - -	5	Turning wood - -	Do.	1834	Otis Turner - -	4
	Britannia Ware Manufactory	H. Putnam - -	3	Turning, &c. - -	Do.	1837	Do. - -	1
W. Cambridge	Card Manufactory -	Whittemore & Co. -	8	Driving machinery -	Do.	1831	Goulden - -	7
	Card Manufactory -	G. & H. Whittemore -	8	Do. - - -	Do.	1837	Adams - -	1
	Machine Shop - -	Thomas Thorp -	4	Do. - - -	Do.	1825	Thorp - -	13
	Saw Manufactory - -	Welsh & Griffith -	75	Grinding saws, &c. -	Do.	1836	Hinsley Iron Co., Eng'd	2
	Calico Print Works -	Schoolers - -	6	Driving machinery -	Do.	1836	H. Hinkley - -	2
Charlestown -	Bleachery - -	Milk Row Bleachery -	40	Do. - - -	Do.	1835	Do. - -	3
Cambridge -	Twine and Cordage -	J. Edwards - -	4	Spinning - - -	Do.	1832	Keene - -	6
	Printing Office - -	Folsom, Wells, & Thurston.	8	Printing press - -	Do.	1837	J. & S. Adams -	1
	Sash and Blind Manufactory	Hovey & Markum -	4	Sawing and planing -	Do.	1836	Adams & Hammond -	2
	Box Factory - -	Charles Valentine -	4	Do. - - -	Do.	1836	Hinkley - -	2
	Carriage Factory - -	Kimball & Davenport -	4	Sawing, &c. - -	Do.	1836	Adams & Hammond -	2
	Box Factory - -	James Greenwood -	4	Do. - - -	Do.	1837	Bartholomew - -	1
	Steam Saw Mill - -	A. P. Sherman -	6	Do. - - -	Do.	1834	A. Waterman - -	4
	Soap Manufactory -	E. A. & W. Winchester	6	Pumping water, &c. -	Do.	1836	H. Hinkley - -	2
	Flint Glass Co. - -	Flint Glass Co. -	50	Cutting glass - -	Do.	1836	Furgerson - -	2
Boston -	Mill-Pond Planing Co. -	Mill-Pond Planing Co.	8	Planing and sawing -	Do.	1837	J. & S. Adams -	1
Hingham -	Bucket Manufactory -	Humphreys - -	4	Do. - - -	Do.	1836	Keene - -	2
	Bucket Manufactory -	Wilder & Son -	6	Do. - - -	Do.	1830	Hinkley - -	8
Char. N. Yard	Cordage and Cable Manuf.	United States -	30	Manuf. cordage and cables -	Do.	1837	Thomas Ashcroft -	1
	Cordage and Cable Manuf.	Do. - -	15	Do. - - -	Do.	1837	Do. - -	1
	Dry Dock - - -	Do. - -	50	Pumping out dock† -	Do.	1832	E. A. Leister - -	6

*Manufacture iron fences. †Pendulum highly approved engine.

C 3—Continued.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
								Years.
Roxbury	Boston Lead Company	Boston Lead Co.	30	Manfac. sheet lead, lead-pipes, and painters' lead	High pres.	1831	Ashcroft	7
	Boston Lead Company	Do.	30	Do.	Do.	1832	Mill-dam Foundry	6
Boston	Argus Manufacturing Co.	Argus Manuf. Co.	14	Spinning hemp	Do.	1836	Adams	2
Roxbury	Tannery	Charles Davis	12	Pumping and grinding bark	Do.	1833	Mill-dam Foundry	5
Boston	Cordage Manufactory	J. W. Lewis	15	Manufacturing cordage	Do.	1834	Hinkley & Co.	4
	Cordage Manufactory	Do.	6	Do.	Do.	1834	Do.	4
Roxbury	Box Factory	Asa Clapp	4	Turning wood	Do.	1834	Do.	4
	Tannery	Guild, White, & Co.	8	Fulling hides & grind'g bark	Do.	1835	Do.	3
	Roxbury Chemical Co.	Roxbury Chemical Co.	15	Driving machinery	Do.	1832	Mill-dam Foundry	6
	Norfolk Laboratory Co.	Norfolk Laboratory Co.	6	Do.	Do.	1830	Holmes Hinkley	8
	Cordage Manufactory	Sewall Day	12	Spinning hemp	Do.	1837	Do.	1
	Edge-tool Manufactory	Hobbs	6	Turning grindstone	Do.	1837	Graham	1
	Bale-rope Factory	Daniel Perkins	25	Manufacturing bale-rope	Do.	1837	John Goulden	1
	Grain Mill	Stearns & Jones	50	Grinding grain	Low pres.	1837	Do.	1
	Roxbury India Rubber Co.	Roxbury I. Rubber Co.	24	Driving machinery	High pres.	1835	Holmes Hinkley	3
	Roxbury Fur Factory	J. Prescott & Sons	7	Cleansing skins	Do.	1837	Do.	1
	Cordage Factory	Moses Day & Co.	10	Manufacturing cordage	Do.	1835	John Goulden	3
Boston	Machine Manufactory	Adams & Hammond	6	Blowing and turning	Do.	1836	Dawley	2
	Machine Manufactory	Wadleigh & Badger	10	Blowing, drilling, and turn'g	Do.	1835	Wadleigh & Badger	3
	Last Manufactory	Collins & Stevens	6	Turning wood, &c.	Do.	1837	James M. Pond	1
	Machinery	Otis Tufts	4	Blowing, turning, &c.	Do.	1837	Otis Tufts	1
	Iron Foundry	M. Cornell	15	Do.	Do.	1834	Holmes Hinkley	4
	Marble Manufactory	J. Templeton	14	Sawing and polishing marble	Do.	1834	Do.	4
	Machinery	Thomas Ashcroft	4	Blowing bellows, &c.	Do.	1832	Thomas Ashcroft	6
	Fulton Iron Foundry	Geo. C. Thatcher	6	Melting iron	Do.	1835	Holmes Hinkley	3
	S.engine and PrintingPress.	J. & Seth Adams	7	Turning iron and wood	Do.	1835	Seth Adams	3
	South Boston Iron Co.	C. Alger & Co.	20	Blowing bellows, &c.	Do.	1830	Alger	8
	South Boston Iron Co.	Do.	20	Turning and drilling	Do.	1835	Do.	3
	South Boston Iron Co.	Do.	10	Do.	Do.	1834	Do.	4

	Barrel Manufactory -	S. Nickolson -	8	Dressing staves - -	Do.	1829	Holmes Hinkley -	9
	Chain-cable Manufactory -	Cotton, Hill, & Co. -	18	Manufacturing chain-cables	Do.	1837	J. & Seth Adams -	1
	Boston Cork Co. - -	Boston Cork Co. -	6	Driving machinery -	Do.	1835	Goulden - -	3
	Steam-engine Manufactory	Hinkley & Drury -	8	Turning, drilling, &c. -	Do.	1836	Holmes Hinkley -	2
	Box Manufactory - -	Isaac Tirrel - -	3	Sawing, &c. - -	Do.	1833	Do. - -	5
	Planing Mill - -	R. Urann - -	30	Sawing and planing -	Do.	1831	Sabbatam, New York -	7
	Machine Shop - -	James M. Pond -	8	Forging and turning iron -	Do.	1835	James M. Pond -	3
	Mt. Washington House -	Warren Association -	6	Washing, &c. - -	Do.	1835	Seth Adams - -	3
	Pearl Street House -	P. Shepard - -	3	Do. - - -	Do.	1837	Keene - -	1
	Machine Shop - -	Wm. B. Dodge & Co.	4	Turning and sawing -	Do.	1835	E. Bartholomew -	3
	Piano Forte Manufactory -	T. Gilbert & Co. -	8	Turning, sawing, &c. -	Do.	1837	Otis Tufts - -	1
	Lamp Manufactory -	Wm. Carlton -	5	Turning, &c. - -	Do.	1834	M. Baldwin, Philadelphia	4
	Morning Post Print. Office	Beals & Greene -	2	Working press -	Do.	1838	Otis Tufts - -	New.
Malden -	Coloring Factory - -	W. & C. Baldwin & Co.	6	Working machinery -	Do.	1836	Hill, of Salem -	2
	Last Factory - -	Samuel Cox - -	5	Turning wood - -	Do.	1834	Otis Turner - -	4
	Britannia Ware Manufactory	H. Putnam - -	3	Turning, &c. - -	Do.	1837	Do. - -	1
W. Cambridge	Card Manufactory -	Whittemore & Co. -	8	Driving machinery -	Do.	1831	Goulden - -	7
	Card Manufactory -	G. & H. Whittemore -	8	Do. - - -	Do.	1837	Adams - -	1
	Machine Shop - -	Thomas Thorp -	4	Do. - - -	Do.	1825	Thorp - -	13
	Saw Manufactory - -	Welsh & Griffith -	75	Grinding saws, &c. -	Do.	1836	Hinsley Iron Co., Eng'd	2
	Calico Print Works -	Schoolers - -	6	Driving machinery -	Do.	1836	H. Hinkley - -	2
Charlestown -	Bleachery - -	Milk Row Bleachery -	40	Do. - - -	Do.	1835	Do. - -	3
Cambridge -	Twine and Cordage -	J. Edwards - -	4	Spinning - - -	Do.	1832	Keene - -	6
	Printing Office - -	Folsom, Wells, & Thurston.	8	Printing press - -	Do.	1837	J. & S. Adams -	1
	Sash and Blind Manufactory	Hovey & Markum -	4	Sawing and planing -	Do.	1836	Adams & Hammond -	2
	Box Factory - -	Charles Valentine -	4	Do. - - -	Do.	1836	Hinkley - -	2
	Carriage Factory - -	Kimball & Davenport -	4	Sawing, &c. - -	Do.	1836	Adams & Hammond -	2
	Box Factory - -	James Greenwood -	4	Do. - - -	Do.	1837	Bartholomew - -	1
	Steam Saw Mill - -	A. P. Sherman -	6	Do. - - -	Do.	1834	A. Waterman - -	4
	Soap Manufactory -	E. A. & W. Winchester	6	Pumping water, &c. -	Do.	1836	H. Hinkley - -	2
	Flint Glass Co. - -	Flint Glass Co. -	50	Cutting glass - -	Do.	1836	Furgerson - -	2
Boston -	Mill-Pond Planing Co. -	Mill-Pond Planing Co.	8	Planing and sawing -	Do.	1837	J. & S. Adams -	1
Hingham -	Bucket Manufactory -	Humphreys - -	4	Do. - - -	Do.	1836	Keene - -	2
	Bucket Manufactory -	Wilder & Son -	6	Do. - - -	Do.	1830	Hinkley - -	8
Char. N. Yard	Cordage and Cable Manuf.	United States -	30	Manuf. cordage and cables -	Do.	1837	Thomas Ashcroft -	1
	Cordage and Cable Manuf.	Do. - -	15	Do. - - -	Do.	1837	Do. - -	1
	Dry Dock - - -	Do. - -	50	Pumping out dock† -	Do.	1832	E. A. Leister - -	6

*Manufacture iron fences. †Pendulum highly approved engine.

SIR: I enclose you the returns of steam-engines in the county of Middlesex.

I shall pursue the inquiry no farther, unless directed.

Very respectfully, [illegible]

Hon. LEVI WOODBURY, *Secretary of the Treasury, Washington.*

C 6.

Return of steam-engines used on railroads in the county of Hampden, Massachusetts; prepared in pursuance of the instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Western	Not named	10	High	1838	William S. Otis	8 months	Used for excavating earth only.
Western	Not named	8	High	1837	William S. Otis	18 months	For propelling cars with earth.

Return of all the steam-engines in use in the counties of Franklin, Hampshire, Hampden, and Berkshire, exclusive of those used in steamboats and railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Greenfield	Pierce's foundry	John J. Pierce	4	Machinery	Low	1835	John Gore	3 years	Franklin county.
Do.	Gun factory	Rust	3	Do.	Low	1837	Do.	12 months	Do. do.
Northampton	Beet-sugar house	William Clark	6	Do.	High	1835	Do.	3 years	Hampshire do.
Do.	Silk factory	Samuel Whitemarsh	5	Do.	High	1836	Do.	18 months	Do. do.
Do.	Cocoonery	Do. do.	1	Reeling silk	High	1836	Do.	Never used	Do. do.
Amherst	Carriage factory	L. M. Hills	5	Machinery	High	1834	Do.	3 years	Do. do.
South Hadley	Paper mill	E. T. & G. A. Smith	5	Do.	Low	1836	Do.	18 months	Do. do.
Springfield	Springfield steam-mill	Satinet Company	18	Do.	Low	1836	Do.	12 months	Hampden do.
Pittsfield	Squire's mill	Ames, Squires, & Son	8	Do.	Low	1837	Starbuck	A few weeks	Berkshire do.

C N.

Return of all the steam engines in use in the county of Middlesex, not heretofore returned, exclusive of those used in steamboats and on railroads, prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 30, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Newton Upper Falls	Cotton mill	Newton Manufact'g Co.	60	Driving machinery	High	1838	Hinkley & Drury	8 years.
	Machine shop	Perley	8	Driving lathe, &c.	High	1834	Do do	4 years.
Waltham	Boston Manufact'g Co.	Do	80	Manuf'g cotton goods	High	1838	Do do	8 years.
	Do do	Do	40	For bleaching	High	1814	Ashcroft	8 years.
Dunstable	Tannery	Seth Woodbury	8	Grinding bark, &c.	High	1833	Hinkley & Drury	5 years.

C 9.

COLLECTOR'S OFFICE, *Salem, Oct.* 11, 1838.

SIR: In answer to yours of the 1st instant, I have to state that there are no steamboats belonging to or employed in this district; the other returns required by your circular of the 12th July last are herewith transmitted.

Very respectfully, I am, sir, your obedient servant,

J. MILLER, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury U. S., Washington city.

C 10.

Return of steam-engines used on railroads in the district of Salem and Beverly; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Names of locomotives.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Eastern railroad -	Suffolk, Essex, Merrimack, and Rockingham.	40 each.	High	1838	Proprietors of locks and canals, Lowell.	Since Aug. 27, 1838.	No explosion, or other accident, excepting two brakemen killed in passing under the bridges, in consequence of standing up in conversation, in violation of the rules.

COLLECTOR'S OFFICE,
District of Salem and Beverly, Oct. 11, 1838.

J. MILLER, *Collector.*

Return of all the steam-engines in use in the county of Middlesex, not heretofore returned, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purposes used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Newton Upper Falls	Cotton mill - -	Newton Manufact'g Co.	60	Driving machinery -	High -	1836	Hinkley & Drury	2 years.
	Machine shop - -	Pettey - -	8	Driving lathe, &c. -	High -	1834	Do do	4 years.
Waltham - -	Boston Manufact'g Co.	Do - -	80	Manuf'g cotton goods	High -	1836	Do do	2 years.
	Do do	Do - -	40	For bleaching -	High -	1832	Ashcroft -	6 years.
Dunstable - -	Tannery - -	Seth Woodbury -	8	Grinding bark, &c. -	High -	1833	Hinkley & Drury	5 years.

C 12.

CUSTOM-HOUSE, *Newburyport, July* 31, 1838.

SIR: I have the honor to transmit you, herewith, two tabular statements, containing the information relative to steam-engines used in this district, called for under the first eight branches of a resolution of the House of Representatives, according to the forms transmitted with your circular of the 12th instant.

No steamboats are owned in this district. I regret that my limited experience in these subjects will not enable me to impart any information material to the purposes connected with the 9th branch of the resolution.

I am, sir, very respectfully, your obedient servant,

SAMUEL PHILLIPS, *Collector.*

HON. LEVI WOODBURY,
Secretary of the Treasury, Washingon city.

C 13.

Return of steam-engines used on railroads in the district of Newburyport; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Names of locomotives.	Power of engine, in horses.	High or low pressure.	When constructed.	How long in use.	By whom constructed.
Andover and Haverhill	Andover, Haverhill, and Rockingham.	30 each	High	Andover & Haverhill, 1836 Rockingham, 1837.	Andover, 2 years Haverhill, 1 yr. 9 ms. Rockingham, 9 mos.	Corporation of proprietors of locks and canals, Lowell.

COLLECTOR'S OFFICE, *District of Newburyport, July* 31, 1838.

SAMUEL PHILLIPS, *Collector.*

...all the steam-engines in use in the district of Newburyport, exclusive of those used in steamboats and on ...ls; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with ...olution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Salisbury -	Salisbury Mills Steam Co.	Jonathan B. Webster and others.	Seven -	Manufacturing machinery.	High	May, 1836	Holmes Hinkley & Co.	2 years.
Haverhill -	J. & J. Bradley's last manufactory.	J. &. J. Bradley -	Six -	Manufacturing lasts -	High	1835	Boiler by Kean -	3 years.
Georgetown -	Georgetown hide & bark steam manufactory.	John Kimball & others	Nine -	Grinding bark and fulling hides.	High	July, 1835	Holmes Hinkley & Co.	3 years.
Newburyport	Bartlett Mill - -	William Bartlett -	Fifteeen	Spinning and weaving cotton.	High	July, 1837	Adams & Howard -	1 year
Newburyport	Newburyport Steam Cotton Co.	Step. W. Marston & others.	Forty -	Manufacture of cotton cloth.	High	1835	Providence Steam-Engine Co.	2½ years.
Newbury -	Patent cordage manufactory.	Michael Wormstead & Co.	Six -	Manufacturing cordage	High	1837	Increase Hill, Salem -	1 year.
Newburyport	Machine shop - -	Edward S. Lesley -	Six -	Building machinery -	High	1834	Edgely and Riley, Charlestown, Mass.	3 years.

COLLECTOR'S OFFICE, *District of Newburyport, July* 31, 1838.

SAMUEL PHILLIPS, *Collector.*

CUSTOM-HOUSE, *Newburyport, July* 31, 1838.

SIR: I have the honor to transmit you, herewith, two tabular statements, containing the information relative to steam-engines used in this district, called for under the first eight branches of a resolution of the House of Representatives, according to the forms transmitted with your circular of the 12th instant.

No steamboats are owned in this district. I regret that my limited experience in these subjects will not enable me to impart any information material to the purposes connected with the 9th branch of the resolution.

I am, sir, very respectfully, your obedient servant,

SAMUEL PHILLIPS, *Collector.*

HON. LEVI WOODBURY,
Secretary of the Treasury, Washingon city.

C 13.

Return of steam-engines used on railroads in the district of Newburyport; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Names of locomotives.	Power of engine, in horses.	High or low pressure.	When constructed.	How long in use.	By whom constructed.
Andover and Haverhill	Andover, Haverhill, and Rockingham.	30 each	High	Andover & Haverhill, 1836 Rockingham, 1837.	Andover, 2 years Haverhill, 1 yr. 9 ms. Rockingham, 9 mos.	Corporation of proprietors of locks and canals, Lowell.

COLLECTOR'S OFFICE, *District of Newburyport, July* 31, 1838.

SAMUEL PHILLIPS, *Collector.*

C 16—Continued.

Return of all the steam-engines in use in the district of New Bedford, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
New Bedford	Looking-glass manufactory	John Sowle	3	Sawing	High	1832	Elias Strange	6 years.
New Bedford	Iron foundry	B. & C. W. Ricketson	8	Blowing, drilling, &c.	High	1833	Holmes & Hinkley	5 years.
New Bedford	Davenport's mill	Dudley Davenport	12	Sawing, planing, and grinding	High	1832	Holmes & Hinkley	6 years.
New Bedford	Steam paint-mill	Bennett Wilcox	12	Grinding paint	High	1837	Holmes & Hinkley	1 year.
New Bedford	Prussian-blue manufactory	H. F. Davis & Co.	2	Pumping water	High	1832	Elias Strange	6 years.
New Bedford	Blacksmith's shop	James Durfee, jr.	6	Turning, drilling, &c.	High	1833	Holmes & Hinkley	5 years.

COLLECTOR'S OFFICE, *District of New Bedford, August* 14, 1838.

ROBERT S. SMITH, *Collector.*

I am, most respectfully, your most obedient servant,

PETER DIXEY, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury of U. S.

C 18.

Return of all the steam-engines in use in the district of Marblehead and Lynn, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Lynn	Tool manufactory	T. N. Breed	8	For turning	High	1836	Isaiah S. Hill	2 y'rs	No information can be obtained of any disaster happening at either of these factories.
Do.	Sawing and planing	J. N. Buffour	6	Saw mill	High	1833	Holmes Hardy	5 "	
Do.	Last factory	R. Richards	unknown	Machinery	High	1834	I. S. Hill	4 "	
Do.	Cordage	D. N. Bruce	8	Do.	High	1834	Golding	4 "	
Do.	India rubber	Company	6	Do.	High	1836	Do.	2 "	
Marblehead	Wilson's ropewalk	Maim and Co.	8	Cordage	High	1832	Bartholomew	6 "	Two new boilers this year.

COLLECTOR'S OFFICE,
District of Marblehead and Lynn, Oct. 8, 1838.

PETER DIXEY, *Collector.*

C 16—Continued.

Return of all the steam-engines in use in the district of New Bedford, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
New Bedford	Looking-glass manufactory	John Sowle	3	Sawing	High	1832	Elias Strange	6 years.
New Bedford	Iron foundry	B. & C. W. Ricketson	8	Blowing, drilling, &c.	High	1833	Holmes & Hinkley	5 years.
New Bedford	Davenport's mill	Dudley Davenport	12	Sawing, planing, and grinding	High	1832	Holmes & Hinkley	6 years.
New Bedford	Steam paint-mill	Bennett Wilcox	12	Grinding paint	High	1837	Holmes & Hinkley	1 year.
New Bedford	Prussian-blue manufactory	H. F. Davis & Co.	2	Pumping water	High	1832	Elias Strange	6 years.
New Bedford	Blacksmith's shop	James Durfee, jr.	6	Turning, drilling, &c.	High	1833	Holmes & Hinkley	5 years.

COLLECTOR'S OFFICE, *District of New Bedford, August* 14, 1838.

ROBERT S. SMITH, *Collector.*

CUSTOM-HOUSE, *Marblehead, October* 8, 1838.

SIR: Enclosed you have the return of all the steam-engines in this district, agreeable to your circular of the 12th July, 1838.

I am, most respectfully, your most obedient servant,

PETER DIXEY, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury of U. S.

C 18.

Return of all the steam-engines in use in the district of Marblehead and Lynn, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Lynn	Tool manufactory	T. N. Breed	8	For turning	High	1836	Isaiah S. Hill	2 y'rs	No information can be obtained of any disaster happening at either of these factories.
Do.	Sawing and planing	J. N. Buffour	6	Saw mill	High	1833	Holmes Hardy	5 "	
Do.	Last factory	R. Richards	unknown	Machinery	High	1834	I. S. Hill	4 "	
Do.	Cordage	D. N. Bruce	8	Do.	High	1834	Golding	4 "	
Do.	India rubber	Company	6	Do.	High	1836	Do.	2 "	
Marblehead	Wilson's ropewalk	Maim and Co.	8	Cordage	High	1832	Bartholomew	6 "	Two new boilers this year.

COLLECTOR'S OFFICE,
District of Marblehead and Lynn, Oct. 8, 1838.

PETER DIXEY, *Collector.*

C 19.

COLLECTOR'S OFFICE,
District and Port of Fall River, July 28, 1838.

SIR: I herewith forward three tables, embracing all the information required, in tabular forms, by the circular from the Treasury Department of July 12, relating to steam-engines in the district of Fall River.

The information, having been obtained in every instance either from the owners or agents of the establishments in which the engines are used, may be relied on as correct.

Under the head "remarks" in the several tables will be found all that can be said in reply to "branches" second, third, fourth, fifth, sixth, and seventh. The first and eighth are answered by the tables themselves.

In order to enable me to reply to the ninth head, I addressed a note, containing three questions, to a very intelligent gentleman of this place, Bradford Durfee, Esq., a man of much experience and great practical knowledge on this subject. I cannot, perhaps, do better than make a transcript of my inquiries, and the answers to them as furnished by Mr. Durfee.

Question. Are you acquainted with any improvements in the construction of steam-engines or steamboats, which you deem useful, but which are not yet in general use?

Answer. "To use low-pressure engines; and to make the cylinder of sufficient capacity to work off the steam, without raising the steam at the extreme height—say over eighteen pounds to the square inch on the boiler."

Question. What legislation, if any, would you deem conducive to the increased safety of steamboat navigation?

Answer. "To restrict all low-pressure engines to the use of steam not to exceed eighteen pounds to the square inch."

Question. What, in your opinion, are the most general causes which result in the explosion of steamboat boilers?

Answer. "The use of ardent spirits on board steamboats, and the negligence of the engineer in letting the water get *too* low in the boiler; which causes the steam to rise in the same proportion as the water gets low."

In the steamboat King Philip, of which Mr. Durfee is one of the owners, the principles laid down in the above answers have been in practice for six years; with what success, the accompanying return of that boat will show.

An *asserted* improvement, under the name of "Goulding's patent safety-boilers," is at this moment occupying public attention in this quarter. I have not seen his improvement, and cannot, therefore, speak of it from personal observation. I understand, however, his arrangement to be something like this: the boilers are not surrounded by fire, but so disposed that the main cylinder is in a great measure surrounded by water, and by a large number of tubes is attached to an outer cylinder. This improvement is highly spoken of in some of our public journals. As it is patented, it will not be difficult farther to investigate its probable merits, should it be deemed important.

I will close with one other remark: the new law, "to provide for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam," approved on the 9th instant, should, in my opinion, have a fair trial; experience will test its defects, if any it have, and future legislation may correct them.

I am, very respectfully, sir, your obedient servant,

P. W. LELAND, *Collector.*

HON. LEVI WOODBURY, *Secretary of the Treasury.*

Return of all the steam-engines in use in the district of Fall River, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill, or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
								Y'rs.	
Fall River	Planing mill - -	Bowenville company	8	Planing boards -	Low	1833	- - - -	5	A part of these engines are used in several manufacturing establishments only in case of a deficiency of water during long droughts, or a heavy press of business; others are in constant use, having no connexion with water-power whatever.
Do. -	Do. - -	Do.	10	Planing, sawing, and grinding.	Do.	1836	Prov. Steam company.	2	
Taunton -	Whittington mills -	James K. Mills and others.	75	Manufacturing cotton -	High	1837	Crocker & Richmond	1	
Do. -	Hopewell manuf'ing co.	Crocker and others -	60	Do. -	Do.	1836	Steam Eng. co., Prov.	2	
Do. -	Crocker manuf'ing co.	Do.	60	Do. -	Do.	1836	Do. do. -	2	
Do. -	Bristol print works -	J. K. Mills & others	30	Printing calico -	Do.	1828	Sattalen, New York	10	
Do. -	Taunton iron foundry	Crocker and others -	50	Casting iron -	Do.	1824	Do. do. -	14	
Do. -	Do. do. -	James Sprout -	20	Grinding, sawing, and planing.	Do.	1835	Steam Engine company, Providence.	3	
Do. -	Do. do. -	Crocker and others -	8	Making machinery -	Do.	1834	Do. do. -	4	
Do. -	Do. do. -	Albert Field -	10	Cutting tacks & brads	Do.	1835	Do. do. -	3	
Do. -	Do. do. -	A. Mason -	5	Do. do. -	Do.	1835	Do. do. -	3	

COLLECTOR'S OFFICE, *District of Fall River, July* 25, 1838.

P. W. LELAND, *Collector.*

C 21.

Return of steam-engines used in steamboats in the district of Fall River; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Name of master or commander.	Name of engineer.	Power of engine, in horse.	High or low pressure.	By whom engine constructed.	Remarks.
King Philip.	Daily between Fall River and Providence.	One hundred and sixty-nine tons.	One hundred and twenty feet eight inches.	Nineteen feet eight inches.	Seven feet six inches.	New York.	Eighteen hundred and thirty-two.	Lawrence and Sisters.	Fall River Iron Works Company and American Manufactory.	Thomas Borden.	Isaac Borden.	Forty.	Low.	Woolcott Steam Engine Manufacturing Company.	Eighteen hundred and thirty-two.	Six years.	Is getting somewhat worn since this boat has been in use. It performs a trip to and from Providence every day: distance, by steamboat route, 59 miles. No lights of any kind were up excepted are kept if sold at Detroit this year.

COLLECTOR'S OFFICE,
District and Port of Fall River, July 28, 1838.

P. W. LELAND, *Collector.*

Return of steam-engines used on railroads in the district of Fall River; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Names of locomotives.	Power of engine, in horses.	High or low pres.	When construct'd	By whom constructed.	How long in use.	Remarks.
Taunton Branch Railroad	Taunton -	30	High	1836	Lock and Canal Co. at Lowell, Mass.	2 years	No delay or accident has ever occurred on this road. This branch is eleven miles in length, and runs from Taunton, through Norton and a part of Mansfield, and joins the Boston and Providence railroad at the latter-named place.
Taunton Branch Railroad	N. Bedford	30	High	1837		1 year.	

COLLECTOR'S OFFICE, *District of Fall River, July* 25, 1838.

P. W. LELAND, *Collector.*

C 23.

COLLECTOR'S OFFICE, *District of Nantucket, July* 23, 1838.

SIR: I have the honor to transmit the information called for by the resolution of the House of Representatives of the 29th ultimo, in relation to steam-engines in use in this district.

No disaster having hitherto occurred, and no steam-engines being in use in this district on railroads, two of the tabular forms received from the Department embrace all the information I can impart under the first eight branches of the resolution.

Under the ninth head I can only state, that I have not been conversant with the improvements of steamboats, or engines recently introduced, and feel wholly incompetent to suggest any rules or plans in relation to them, or any legislative enactments for their regulation and government.

I am, most respectfully, your obedient servant,

MARTIN T. MORTON, *Collector.*

HON. LEVI WOODBURY, *Secretary of the Treasury, Washington.*

C 24.

Return of all the steam-engines in use in the district of Nantucket, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Names of owners.	Power of engine, horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Nantucket -	M. Myrick, P. & J. Myrick -	8	Manufacture of cordage -	High	1834	H. Hinkley -	2 years, or thereabouts.

COLLECTOR'S OFFICE, *District of Nantucket, July* 23, 1838. MARTIN T. MORTON, *Collector.*

C 25.

Return respecting steam-engines used in steamboats in the district of Nantucket; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length form stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters of commanders.	Names of engineers.	Power of engine, horses.	High or low pressure.	By whom engine was constructed.	When engine was constructed.	How long in use.
		T. 95ths.	*Ft. in.*	*Ft. in.*	*Ft. in.*											
Telegraph	Between Nantucket & New Bedford.	171 20	120 6	19 6	7 8	N. York	1832	Lawrence & Sniden.	Nantucket Steamboat Company.	L. Phinney	Jas. Brow	60	Low	West Point foundry, N. York.	1832	6 y'rs.

COLLECTOR'S OFFICE, *District of Nantucket, July* 23, 1838. MARTIN T. MORTON, *Collector.*

C 26.

COLLECTOR'S OFFICE, *District of Barnstable, July* 25, 1838.

SIR: Herewith enclosed you will receive my answers to the several inquiries contained in the resolution of the House of Representatives passed on the 29th ultimo, given in accordance with your directions in circular dated the 12th instant.

I have no knowledge of there ever having been more than one steam-engine in operation in this district; and my acquaintance with such machinery will not justify me in making any suggestions relative to any legislation upon the subject; therefore, I have considered the inquiries contained in the resolution fully answered, so far as respects this district, in the manner in which I have filled the blank forms transmitted to me with your circular, and which I herewith return.

I am, sir, very respectfully, your obedient servant,

HENRY CROCKER, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

C 27.

Return of all the steam-engines in use in the district of Barnstable, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	Remarks.
Sandwich	Sandwich glass manufactory.	Boston and Sandwich GlassCo.; (incorporated.)	One engine of 20-horse power.	Grinding glass.	High	1838	J. & S. Adams, South Boston.	This engine is now being put up instead of one of 10-horse power which has been in operation for 10 years, but is now taken down to make room for this. The former one was a low pressure, had got out of repair, and was not so powerful as the business required. No explosion or other disaster has ever occurred from steam-engines in this district.

DISTRICT OF BARNSTABLE, *July* 25, 1838.

HENRY CROCKER, *Collector.*

Sir [illegible]

In the [illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. No [illegible] within this district.
5. No [illegible] to steamboats within this district.
6. There are no steamboats belonging to this district.
7. No owners.
8. I have no information on this resolution that can possibly be of the least use.
9. This resolution must be answered by those who are in possession of more knowledge, and have [illegible] ation regarding the subject than I have.

I am, with very great respect, your obedient servant,

WILLIAM BEACH, *Collector.*

Hon. LEVI WOODBURY, *Washington City.*

C 29.

Return of all the steam-engines in use in the district of Gloucester, Massachusetts, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manuf'ry.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Manchester	Veneering mill.	John P. Allen	20-horse power	Sawing veneers	High -	1836	Holmes Hinkley & Co.	June, 1836	The build'g of stone cost $10,000.

CUSTOM-HOUSE, GLOUCESTER, *Collector's Office, September* 11, 1838.

WILLIAM BEACH, *Collector.*

C 30.

COLLECTOR'S OFFICE,
District of Ipswich, November 7, 1838.

SIR: In answer to your circular of the 12th July last, and that of the 1st instant, I have to reply, that there are no steam-engines owned or used in this district, either in steamboats, on railroads, or in any other way; and no explosions or disasters have ever happened to any steam-engine within this district, so far as my knowledge extends.

I am, respectfully, your obedient servant,

TIMO. SOUTHER, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury,
Washington City.

[The collectors at Plymouth and Edgartown have, in like manner, reported that there are no steam-engines in use in their districts.]

CONNECTICUT.

D 1.

COLLECTOR'S OFFICE,
District of New Haven, October 5, 1838.

SIR: I herewith transmit the returns of all the steamboats and steam-engines in the district of New Haven, in compliance with the resolutions of the House of Representatives of 29th of June, 1838. I have taken great pains, and been at considerable expense, to obtain the information required, and am positive that the description of the steamboats and steam-engines as given in the returns is correct.

I would respectfully inquire whether I may not charge for the extra expenses incurred.

I am, very respectfully, your obedient servant,

WM. H. ELLIS, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury,
Washington City.

D 2.

Return respecting steam-engines used in steamboats in the district of New Haven; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			feet.	ft. in.	ft. in.		Y'r.								Years.	Y'rs.
Splendid -	Between N. Haven and New York; now not running.	209 73	130	21 6	12 7	New York.	1832	Smith, Demon, and Comstock.	New Haven Steamboat Company.	No one at present.	None at present.	120	Low	New York.	1832	4
New Haven	Between New Haven and New York.	342 86	178	22 8	15 0		1835	Lawrence & Sniden		Joel Stone	J. Thompson	148	Low	James P. Allaire,	1834	4
New York	Between New Haven and New York.	524 13	212	22 10	17 0		1835	Do. do. -		S. B. Stone	L. Merritt -	170	Low		1835 and 1836	2

D 3.

Return of all the steam-engines in use in the district of New Haven, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Number.	Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
									Y'rs.	
1	New Haven	New England sash & blind factory.	J. M. Barlow and Son.	35	Planing, sawing, and turning.	High	1836	Paul A. Sabattan, New York.	1½	Four cylinder boilers, 30 feet, by 26 inches diameter, to prevent sparks; hearth under the end of the boilers; flue passes over a wall into a chamunder one-third of the middle of the boilers. From the chamber, flue passes through another wall into the chimney.
2	Do.	Artisan street foundry.	Chs. Nichols	16	Making axles, and turning.	do.	1834	Paul A. Sabattan, New York.	4	Three cylinder boilers.
3	Do.	N. Haven sash & blind factory.	C. Carrington	15	Sash and blind making.	do.	1837	Augustus Parker, Utica, N. York.	1	Two cylinder boilers.
4	Do.	Machine factory.	Kilborn and Smith.	10	Turning & blowing.	do.	1836	Guild & Douglass, Middletown, Ct.	1½	Double cylinder boiler, upon the principle of the cone boiler, No. 10.
5	Do.	Foundry.	Wilcox and Prior.	8	Turning & blowing.	do.	1832	Paul A. Sabattan, New York.	6	Four cylinder boilers, set as those of the "Lock factory"—see No. 8.
6	Do.	Coach factory	Collins and Lawrence.	8	Sawing, turning, and grinding.	do.	1828	Paul A. Sabattan, New York.	10	Two cylinder boilers.
7	Do.	Union planing mill.	Union Planing Company.	8	Planing & sawing	do.	1836	Vicar & Snedeker, New York.	2	Two boilers, side by side, 18 by 2 feet. Sparks prevented, as in the New England sash and blind factory—see No. 1.

D 3—Continued.

Number.	Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
									Y'rs.	
8	New Haven	Lock factory	Pierpont and Hotchkiss.	6	Driving lathes, drills, &c.	High	1834	Novelty works, N. York.	2	Vibrating engine; five cylinder boilers, two above 16 feet long, three below 11 feet long; fire under the two, and at the end of the three; flue passes between them, then down and under the lower ones.
9	Do.	Carpet factory	Galpin and Robertson.	6	Pumping & scouring.	do.	1833	Novelty works, N. York.	5	Vibrating engine; Nott's tubular boilers; tubes have burnt off and filled up without damage.
10	Do.	Bark mill	J. Gilbert & Son.	6	Grinding bark, & fulling hides.	do.	1832	Wm. T. James, New York.	6	James's cone boiler, (double;) exploded, 1833—see account (A.)
11	Do.	Turning mill	R. D. Beach	6	Sawing & turning	do.	1833	Wm. T. James, New York.	5	James's cone boiler, double cylinder.

(A.)

The boilers are two cones, one above the other, the fire being in the lower one. In June, 1833, the lower boiler exploded, and blew the upper one through the roof of the building about twenty feet into the air. Three persons were knocked down, but none seriously injured. The loss of property was about $400. The explosion was caused by a deficiency of water in the boilers. This was discovered by the owner a short time before the accident, and he directed the fire to be put out; but the engineer, supposing there was no danger, refused to do it. He had been employed about the engine with the regular engineer only for about three weeks, and for the first time took the sole charge of it on the day of the explosion. The accident occurred wholly through his inexperience, and want of acquaintance with engines. As an evidence of this, he had employed a boy at the time of the explosion to hold down the safety-valve.

D 4.

COLLECTOR'S OFFICE, *Fairfield, September* 7, 1838.

SIR: Accompanying this are the replies to the inquiries contained in the resolution of the House of Representatives of June 29, 1838, so far as can be ascertained.

Respectfully, your obedient servant,

SAMUEL SIMONS, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

D 5.

Return respecting steam-engines used in steamboats in the district of Fairfield, Connecticut; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Name of owner.	Name of master or commander.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			Ft.	*Ft. in.*	*Ft. in.*											
Nimrod	Bridgeport	291	175	20 8	8 3	New York	1833	Bishop and Simonson.	John Brooks	J. Brooks	Wm. Fogles	80	Low	West Point Association.	1833	5 years.

D 5—Continued.

Return of all the steam-engines in use in the district of Fairfield, Connecticut, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
								Yrs.	
Fairfield -	Whitney foundry -	R. B. & K. Whitney -	6	Iron foundry -	High	1835	P. A. Sabattan -	3	No accidents have occurred of any nature whatever.
Bridgeport	Sterling factory -	S. & G. Sterling -	3	Saddletree factory	High	1836	Whitney, Silliman, & Co.	2	
Do. -	Stone factory -	Haight, Fairchild, & Co.	4	Coach factory -	High	1837	Do. do.	1	
Do. -	Mott's factory -	J. Mott & Co. -	4	Do. -	High	1838	R. B. Whitney		
Do. -	Tomlinson & Wood	Tomlinson, Wood, & Co.	6	Do. -	High	1832	William T. James -	6	

SAMUEL SIMONS, *Collector.*

D 6.

COLLECTOR'S OFFICE, *District of New London, October 5*, 1838.

SIR: In obedience to your circular of July 12, I have the honor to make the accompanying return respecting the steam-engines owned or used in this district. The list is believed to be complete, with the exception of one small engine employed in a cotton manufactory in the town of Plainfield. I wrote to the proprietor of that on the first day of August, and requested an early answer to the queries proposed, but I have had no return from him. As far as I know, or can learn from inquiry of others, no disaster has ever occurred from the explosion of a boiler, or from a collision of boats, or other accident in the use of steam-engines, in this district.

Respectfully, sir, I have the honor to be your most obedient servant,

I. W. CRAWFORD, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury, Washington.*

D 7.

Return respecting steam-engines used in steamboats in the district of New London; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth beam or broad't part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
		Ts. 95ths.						
Norwich - -	From Norwich to New York, &c.	346 45	160ft. 0in.	25 ft. 3 in.	9 ft. 0in.	New York -	1836	Lawrence & Sneeden.
Huntress - -	From Boston to Kennebec river, &c.	333 15	172 0	23 6	9 6	New York -	1838	Lawrence & Sneeden.
Thorn - -	Between Norwich and New Haven.	141 80	126 6	16 6	7 0	Norwich -	1837	George Clark.
Thames - -	Between New London and Norwich.	19 76	63 0	11 0	3 0	In the vicinity of Conn. river -	1831	Unknown.
Kingston - -	On Connecticut river	218 56	149 0	19 9	7 8	Newport, R. I. -	1836	Wm. H. Crandall.

D 7—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constru'd.	How long in use.
New London and Norwich Steamboat Co.	William W. Coit -	Samuel Carter and E. G. Allen.	125	Low -	Cunningham and Hall.	1836	Two years.
New London and Norwich Steamboat Co.	Nathan Kimball -	Savage and C. Moore -	100	Low -	James Cunningham.	1838	Two months.
Appleton Meech, and others.	Appleton Meech -	Philip White - -	35	Low -	Cunningham and Hall.	1837, boiler 1838.	One year.
Elijah A. Bill and C. Stoddard.	Calvin Stoddard -	William Williams -	12	High -	Unknown -	Unknown	Unknown.
Narragansett Bay Steamboat Co.	Edmund D. Roath -	Jos. D. Orswell -	73 to 80	Low -	John Babcock -	1836-7	One year.

D 7—Continued.

Return of steam-engines used on railroads in the district of New London; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Names of locomotives.	Power of engine, in horses.	High or low pres.	When const'd.	By whom constructed.	How long in use.	Remarks.
N. York, Providence, and Boston Railroad Company.	Stonington, Rhode Island, Pawtucket, Little Rest, Greenwich, and Apponaug.	15	High	1836–7	Proprietors of locks and canals, Lowell, Mass., under the superintendence of G. W. Whistler, Esq.	Say nine months.	They have never in any instance failed in any way, so as to cause the detention for a moment of any of the regular trains over the road.

Return of all the steam-engines in use in the district of New London, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pres.	When const'ed.	By whom constructed.	How long in use.
New London	Hardware manufactory.	Increase Wilson	15	To operate foundry, &c.	High	1835	Griggs & Bullock, Catskill, N. Y.	About 3 years. (*a*)
Stonington	Mystic manuf'ry	John Hyde	40	To operate cotton-mill, &c.	High	1834 or '5	George Bangs	About 2 years. (*b*)
Norwich (Falls)	- - -	Joseph Lomise	3 to 4	To op. furnace and turning	High	1834	Joseph Lomise	Ever since built. (*c*)
Norwich (West Chelsea.)	West Chelsea carriage works.	Elijah A. Bill	3 to 4	Driving saws, lathes, &c.	High	1837	Joseph Lomise	Since June, '37. (*d*)
Norwich (Falls)	Norwich foundry	Norwich and N. York Manf. Co.	15	Driving machinery	Low	1836	Holmes, Hinkly, & Co., Boston.	Since Sept. '36. (*e*)

(*a*) The engine has two boilers, heated chiefly with anthracite coal; no accident has happened. (*b*) No remarks returned. (*c*) Small sugar-loaf boiler. (*d*) One boiler 8 feet long, 30 inches diameter, of plate $\frac{3}{8}$ inch. (*e*) Two boilers 28 feet long, 30 inches diameter, of plate $\frac{1}{2}$ inch thick.

COLLECTOR'S OFFICE, *Port of New London, October* 4, 1838. I. W. CRAWFORD, *Collector.*

D 8.

COLLECTOR'S OFFICE,
New Haven, October 18, 1838.

SIR: I forward, with this, a communication from Charles W. Hinman, Esq., in relation to the steamboats owned and employed by the New Haven Steamboat Company, in which is a particular account of the blow-up of the steamboat United States, and also some general remarks in relation to the management of steam-engines, &c.

Mr. Hinman has had long experience in running steamboats; he is a man of close observation, and possessed of much practical knowledge in relation thereto. His communication is undoubtedly worthy of due consideration.

This communication should have accompanied my letter and its accompanying documents of the 5th instant, and I supposed it had, until yesterday, when I found it was here, having been mislaid.

I am, very respectfully, sir, your most obedient servant,

WILLIAM H. ELLIS,
Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

D 9.

NEW HAVEN, *September* 20, 1838.

DEAR SIR: In compliance with your request, I will make a statement of the different boats which have been owned and employed by the New Haven Steamboat Company, the time which each has run, and the success of each. I would also beg leave to submit a few remarks on the subject of explosions—a subject in which all are interested, and on which the public mind, of late, has become exceedingly excited, from their frequency and enormous sacrifice of human life.

The New Haven Steamboat Company commenced operations in 1822. The first boat purchased was the United States, built by William Gibbons, Esq., in 1821. She commenced running between this place and New York in the spring of 1822, and continued to perform three trips each week, (excepting the winter months,) until the spring of 1825, when the company purchased another boat, called the Hudson, built by a Mr. Livingston during the summer of 1824, and commenced running a daily line between the cities of New Haven and New York, which has been kept up regularly, excepting occasional interruptions, to the present time. No accident occurred until the spring of 1826, when one of the flues in the boiler of the steamboat Hudson was partially collapsed. No lives were lost. The accident occurred, no doubt, in consequence of the faulty construction of the boiler, of which I shall hereafter speak, in noticing the explosion of the boiler of the United States.

The United States and Hudson continued to run in connexion with another boat which was purchased during that year, called the Providence, without accident, until the 10th of September, 1830, when a partial explosion took

place in the main flue of the boiler on board the steamboat United States. The circumstances, as near as I can recall them, from memory, are these: She left New York at 5 P. M., and proceeded as far as Blackwell's island, when, on examination of the gauge-cocks, it was found that the water was above the upper cock more than was necessary, and more than could be used to advantage. When I say *to advantage*, I mean that such was the construction of her boiler (having no steam-chimney, and not much head-room for steam above the upper cock) that, should the water be carried continually at that point, in rough weather, water would be worked over through the steam-pipe into the cylinder; in some cases, in such quantities as to almost stop the engine. It was here, where they found that there was more water in the boiler than was necessary, that the feed was partially cut off, and not one-quarter of a minute had elapsed before the explosion took place. It burst upwards, through the centre of a new sheet, which had been put in a few days before, in the bottom of the main flue, about five feet from the bridge-wall, which is at the back end of the furnace; and passed over the wall, through the fire, out of the furnace-doors, on to the forward deck. A portion of the blast came through the spaces between the grate-bars and out of the draught-hole underneath the furnace-doors, bearing with it the deposite of ashes and cinders underneath the grates on to the forward deck; another portion passed backward to the farther end of the main flue. The whole damage was done by that portion which passed out at the furnace-doors and draught-hole. The cause was undoubtedly the faulty construction of the boiler. The boiler, in shape, was a cylinder, with two flues placed side by side, with no other support but the natural strength of wrought-iron three-eighths of an inch in thickness. The fire left the furnace through the right-hand flue, traversing the whole length of the boiler; then, turning at a right-angle and entering the left-hand flue, came back to a line from whence it started, turned upwards at a right-angle to the shell of the boiler into the smoke-pipe. The flues, in shape, were like the letter D; the flat sides inwards, with a space of some three or four inches between them, secured by a few stay-bolts passing from one to the other, to prevent the pressure of steam and water from crowding the sides inwards, and causing what is termed a collapse. On such boilers they usually carried from ten pounds to an atmosphere pressure to the superficial inch—a pressure which, in my opinion, they were not capable of sustaining; nor could they with the same safety sustain it as can the boilers of the present day a pressure of fifty pounds to the inch, which is three times the pressure ordinarily carried; so that the explosion was caused by a pressure of steam (with a sufficiency of water) beyond what certain portions of the boiler were capable of sustaining. It is quite probable that the new sheet of iron, which was put in a few days before the accident, was defective, making that particular place in the flue the weakest portion of the boiler; but, had there been a row of stay-bolts from the shell of the boiler to the bottom of the main flue, in all probability no accident would have happened.

Before entering upon the answer to the inquiry as to the loss of life, it will be necessary to give you some idea of the location of the boiler. The [illegible]r was on the middle of the deck, forward of the engine. A house, [illegible]d of boards about three-fourths of an inch in thickness, projecting [illegible]ight to ten feet beyond the forward and furnace end of the boiler,

formed what is called the fire-room, and protected the boiler from the weather. Two large doors on each side formed the sides of the fire-room; these doors were open always on the passage, unless the weather was severely cold. In front of the fire-room was a stationary bulkhead. A few of the passengers, the cook, some of the hands and waiters of the boat, were standing near these doors. The blast of steam and water from the bottom of the main flue came over the bridge-wall, passed through the furnace-doors and draught-hole as described, and was divided by coming in contact with the fire-room bulkhead; passed out the fire-room doors on each side, and those near the doors were severely scalded; two of them (passengers) jumped overboard and were drowned; the cook, three of the waiters, and one of the firemen, died in the course of twenty-four hours; in all, nine were sacrificed. The boat was commanded by Captain Beecher, an old and experienced commander, who was slightly scalded. The engineer I do not recollect much about; his name was Joseph Slocum. In reviewing that explosion, I have often thought that he was far from being competent to the task of taking charge of a steam-engine. No intoxicating liquors have ever been dealt out to the officers and crew of any of our boats; on the contrary, none is allowed.

New boilers were placed on the United States, in lieu of the former one, of improved construction and of increased streugth; and she performed well, without any accidents, for two years after, when she was sold to run on the Hudson river, where she is still in use as a tow-boat.

In 1831, we purchased a boat, called the Superior, built by Smith, Deman, & Comstock; she performed six hundred and fifty-one trips to and from New Haven and New York, without losing a trip; she is now running on the Hudson river. In 1832, Smith, Deman, & Comstock built another boat for us, called the Splendid; she has never met with an accident; she is now lying up; we use her occasionally. In 1835, Lawrence & Sneeden, of New York, built a boat for us, called the New Haven; she, too, has performed her duty, winter and summer, without the occurrence of any accident, and is running at present.

In 1836, Lawrence & Sneeden also built a boat for this company, called the New York; she, too, has run constantly, winter and summer, without the occurrence of any accident, and is running at present.

I think we owe our safety, from 1830 to the present time, to the fact that our engineers are skilful, experienced, and sober men. One of our engineers has been with us more than twelve years, and has given satisfactory proof of his skill in the fact that not the slightest accident has happened, except occasionally the breakage of some trifling thing about the engine. We have another engineer, who succeeded the engineer of the United States immediately after the explosion; he has also proved himself to be a skilful, experienced, and sober man; he has been in our employ eight years, and no accidents have happened.

The boilers used on board our boats at the present time have each four main and two return flues; the return flues, in shape, are a flattened oval, pierced with cylindrical heaters, secured at each end with flanges riveted to the flat surface of the flues; the flues are constructed with arched tops, and vertical flat sides, terminating in water legs; stay-bolts are placed in the legs, passing from side to side at the distance of every eight inches; strong braces also pass from the arch of the main flues to the bottom of the return flues, and also through the heaters to the shell

D 2.

Return respecting steam-engines used in steamboats in the district of New Haven; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			feet.	ft. in.	ft. in.		Y'r.								Years.	Y'rs.
Splendid -	Between N. Haven and New York; now not running.	209 73	130	21 6	12 7	New York.	1832	Smith, Demon, and Comstock.	New Haven Steamboat Company.	No one at present.	None at present.	120	Low	New York.	1832	4
New Haven	Between New Haven and New York.	342 86	178	22 8	15 0		1835	Lawrence & Sniden		Joel Stone	J. Thompson	148	Low	James P. Allaire,	1834	4
New York	Between New Haven and New York.	524 13	212	22 10	17 0		1835	Do. do. -		S. B. Stone	L. Merritt -	170	Low		1835 and 1836	2

D 3.

Return of all the steam-engines in use in the district of New Haven, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Number.	Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
									Y'rs.	
1	New Haven	New England sash & blind factory.	J. M. Barlow and Son.	35	Planing, sawing, and turning.	High	1836	Paul A. Sabattan, New York.	1½	Four cylinder boilers, 30 feet, by 26 inches diameter, to prevent sparks; hearth under the end of the boilers; flue passes over a wall into a chamber under one-third of the middle of the boilers. From the chamber, flue passes through another wall into the chimney.
2	Do.	Artisan street foundry.	Chs. Nichols	16	Making axles, and turning.	do.	1834	Paul A. Sabattan, New York.	4	Three cylinder boilers.
3	Do.	N. Haven sash & blind factory.	C. Carrington	15	Sash and blind making.	do.	1837	Augustus Parker, Utica, N. York.	1	Two cylinder boilers.
4	Do.	Machine factory.	Kilborn and Smith.	10	Turning & blowing.	do.	1836	Guild & Douglass, Middletown, Ct.	1½	Double cylinder boiler, upon the principle of the cone boiler, No. 10.
5	Do.	Foundry.	Wilcox and Prior.	8	Turning & blowing.	do.	1832	Paul A. Sabattan, New York.	6	Four cylinder boilers, set as those of the "Lock factory"—see No. 8.
6	Do.	Coach factory	Collins and Lawrence.	8	Sawing, turning, and grinding.	do.	1828	Paul A. Sabattan, New York.	10	Two cylinder boilers.
7	Do.	Union planing mill.	Union Planing Company.	8	Planing & sawing	do.	1836	Vicar & Snedeker, New York.	2	Two boilers, side by side, 18 by 3 feet. Sparks prevented, as in the New England sash and blind factory—see No. 1.

D 3—Continued.

Number.	Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
									Y'rs.	
8	New Haven	Lock factory	Pierpont and Hotchkiss.	6	Driving lathes, drills, &c.	High	1834	Novelty works, N. York.	2	Vibrating engine; five cylinder boilers, two above 16 feet long, three below 11 feet long; fire under the two, and at the end of the three; flue passes between them, then down and under the lower ones.
9	Do.	Carpet factory	Galpin and Robertson.	6	Pumping & scouring.	do.	1833	Novelty works, N. York.	5	Vibrating engine; Nott's tubular boilers; tubes have burnt off and filled up without damage.
10	Do.	Bark mill	J. Gilbert & Son.	6	Grinding bark, & fulling hides.	do.	1832	Wm. T. James, New York.	6	James's cone boiler, (double;) exploded, 1833—see account (A.)
11	Do.	Turning mill	R. D. Beach	6	Sawing & turning	do.	1833	Wm. T. James, New York.	5	James's cone boiler, double cylinder.

(A.)

The boilers are two cones, one above the other, the fire being in the lower one. In June, 1833, the lower boiler exploded, and blew the upper one through the roof of the building about twenty feet into the air. Three persons were knocked down, but none seriously injured. The loss of property was about $400. The explosion was caused by a deficiency of water in the boilers. This was discovered by the owner a short time before the accident, and he directed the fire to be put out; but the engineer, supposing there was no danger, refused to do it. He had been employed about the engine with the regular engineer only for about three weeks, and for the first time took the sole charge of it on the day of the explosion. The accident occurred wholly through his inexperience, and want of acquaintance with engines. As an evidence of this, he had employed a boy at the time of the explosion to hold down the safety-valve.

D 4.

COLLECTOR'S OFFICE, *Fairfield, September* 7, 1838.

SIR: Accompanying this are the replies to the inquiries contained in the resolution of the House of Representatives of June 29, 1838, so far as can be ascertained.

Respectfully, your obedient servant,

SAMUEL SIMONS, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

D 5.

Return respecting steam-engines used in steamboats in the district of Fairfield, Connecticut; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Name of owner.	Name of master or commander.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			Ft.	*Ft. in.*	*Ft. in.*											
Nimrod	Bridgeport	291	175	20 8	8 3	New York	1833	Bishop and Simonson.	John Brooks	J. Brooks	Wm. Fogles	80	Low	West Point Association.	1833	5 years.

D 13.

Return of all the steam-engines in use in the district of Middletown, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power en. in horses.	For what purpose used.	High or low pressure.	When constr'd.	By whom constructed.	How long in use.
Hartford -	Machine shop and factory -	Wells & Woodruff -	5	Carrying lathes, and giving blast to foundry.	High	1832	Daniel Copeland -	6 years.
Do. -	Hartford iron foundry -	Hanks, Fitch, & Co. -	8	Giving blast to foundry	Do.	1830	Tuller & Copeland -	8 years.
Do. -	City print. office & rule fac'ry	Case, Tiffany, & Co. -	8	Driving printing presses	Do.	1832	James, of New York -	6 years.
Do. -	Connecticut iron foundry -	Joint stock company -	4	Giving blast to foundry	Do.	1834	Daniel Copeland -	4 years.
Do. -	Silk factory - -	Connec't silk manufac. co.	10	Driving machinery -	Do.	1834	Not ascertained -	4 years.
Do. -	Block-tin and pewter-ware manufactory.	J. D. & S. Boardman -	4	Do. - -	Do.	1834	Daniel Copeland -	4 years.
Do. -	Hartford steam planing-mill	Bristol & Wheaton -	16	Do. - -	Do.	1836	Do. - -	2 years.
Marlborough	Marlborough cotton-mill -	Union manufact'g comp'y	8	Do. - -	Do.	1836	J. Gore & Co., Brattleboro'	2 years.
Glastonbury	Eagle cotton-mill - -	Eagle manufact'g comp'y	6	Do. - -	Do.	1837	Do. - -	1 year.
Wethersfield	Connecticut State prison -	State of Connecticut -	8	Do. - -	Do.	1833	Sabattan, New York -	5 years.
Do. -	Do. - -	William Tuller -	6	Do. - -	Do.	1837	James, of New York -	1 year.
Farmington	Clock manufactory -	John Hunt - -	6	Do. - -	Low	1836	Not ascertained -	2 years.
Berlin -	Brass-ware manufactory -	A. North & Son. -	4	Do. - -	High	1835	John Gore, Brattleboro' -	3 years.
Middletown	Machine shop and factory -	Guild & Douglas -	10	Do. - -	Do.	1835	Guild & Douglas -	2 years & 6 mo.
Do. -	Armory - -	Robert Johnson -	10	Do. - -	Do.	1838	Do. - -	4 months.
Do. -	Wood turning - -	Goodrich & Hubbard -	10	Do. - -	Do.	1836	Do. - -	2 years.
Do. -	Wood turning - -	Frederick Porter -	10	Do. - -	Do.	1837	Do. - -	1 year.
Do. -	Braid manufactory -	Frederick A. Hart -	6	Do. - -	Do.	1838	Do. - -	6 months.
Do. -	Block-tin manufactory -	William Savage & Co. -	6	Do. - -	Do.	1833	Wm. T. James, of N. Y.	5 years.
Do. -	Rule manufactory - -	Asa Richardson -	3	Do. - -	Do.	1837	Asa Richardson -	1 year.
Do. -	Pen manufactory - -	Charles Atwood -	2	Do. - -	Do.	1837	Guild & Douglas -	1 year.
Do. -	Paper-hanging manufactory	Townsend Way -	2	Do. - -	Do.	1836	Asa Richardson -	2 years.
Do. -	Block-tin manufactory -	A. Deolittle - -	2	Do. - -	Do.	1835	Doctor Nott - -	3 years.
Durham -	Tannery - -	M. C. Monson -	10	Do. - -	Do.	1836	Guild & Douglas -	2 years.
East Haddam	Tannery - -	William Palmer, jr. -	6	Do. - -	Do.	–	Wm. T. James, of N. Y.	Not ascertained.

COLLECTOR'S OFFICE, *District of Middletown, October* 31, 1838.

N. A. PHELPS, *Collector.*

E 1.

COLLECTOR'S OFFICE, *October* 8, 1838.

SIR: I have the honor, herewith, to forward the information you desire respecting steam-engines in use in this district; and am,

Very respectfully, your obedient servant,

SAMUEL S. ALLEN, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

E 2.

Return of all the steam-engines in use in the district of Bristol and Warren, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Bristol, R. I.	Bristol steam mill -	Incorporated company	50	Propelling cotton mill -	High	1836	Providence Steam Eng. Co.	18 m'ths.
Warren, R. I.	Rum distillery - -	J. and D. K. Luther	4	Pumping and blowing -	do.	1837	Do. do. -	18 "
Do. -	Furnace company -	J. B. Duval -	6	Blowing fire - -	do.	1836	Do. do.	2 years.

E 3.

DISTRICT AND PORT OF NEWPORT, *Collector's Office, Aug.* 7, 1838.

SIR: In compliance with your circular of July 12th, I herewith forward a statement of steam-engines used in boats enrolled in this district; also a statement of steam-engines other than those used on railroads and steamboats in the same; which comprise all the information in my possession on the subject.

I have the honor to be, very respectfully, your obedient servant,

WILLIAM LITTLEFIELD, *Collector*.

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

E 4.

Return respecting steam-engines used in steamboats in the district of Newport; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Breadth at the broadest part.	Length from stem to stern.	Depth from spar-deck to keel.	When and where built.	By whom built.	Name of owner.	Name of master.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.	Remarks.
Stonington.	Between Providence and India Point.	211 tons and 11 ninety-fifths.	Twenty-three feet two inches.	One hundred and fifteen feet nine inches.	Eight feet six inches.	In 1834, in New York city.	Unknown.	Jesse L. Moss.	P. S. Mills.	Seth Darling.	Forty.	Low, walking beam.	James P. Allaire.	Eighteen hundred and thirty-four.	Four years.	The papers do not show, and the master could not tell who built her.

Memoradum.—No steam-engines used on railroads in this district, with the exception of those used on the Providence and Stonington railroad, both extremes of which being in other districts, it is presumed the collectors of those districts will return them.

DISTRICT AND PORT OF NEWPORT, *Collector's Office, August,* 1838. WILLIAM LITTLEFIELD, *Collector.*

Return of steam-engines in use in the district of Newport, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Newport -	Newport steam Co. -	Incorporated. S. F. Gardner, agent.	25	Manufacturing cotton	High	1831	Holmes Hinkley & Co.	5 years	No accident.
Do. -	Perry manuf'ing co.	Do. do. -	60	Do. -	do.	1835	Do. do. -	3 "	Do.
Do. -	Newport foundry -	Do. do. -	12	Casting -	do.	unkn'n	Unknown - -	Unknown	Bought second
Do. -	Sea Isle factory -	T. R. Hazard -	15	Manuf. cotton & wool	do.	unkn'n	Unknown - -	Unknown	Do. [hand.
Do. -	- - -	J. S. Weeden -	2	Sawing and turning -	do.	1835	Th. Armstrong -	3 years	No accident.
Do. -	- - -	Samuel Pratt -	6	Grinding corn -	do.	1836	Prov. steam-engine co.	2 "	Do.
Portsmouth -	Enterprise mill -	E. W. Lawton & Co.	8	Manufacturing wool	do.	1836	Do. do. -	2 "	Do.
Tiverton -	Print works -	W. Cannady & others	6	Printing calico -	do.	1833	Do. do. -	4 "	Do.
Do. -	Do. -	Do. -	12	Do. -	do.	1834	J. P. Allaire -	4 "	Second hand.
East Greenwich	Manufacturing comp.	D. Greene & others	55	Manufacturing cotton	do.	1828	Do. - -	10 "	No accident.
Do. -	Union steam mill -	Do. -	42	Manuf'ing broadcloth	do.	1836	Prov. steam-engine co.	2 "	Do.
Do. -	Greensdale bleaching	Do. -	30	Bleaching & finishing	do.	1836	Do. do. -	2 "	Do.
Do. -	- - -	Ezra Pollard & Co.	10	Manuf. worsted goods	do.	1836	Do. do. -	2 "	Do.
North Kingston	- - -	Gardner and Hoxie -	10	Manufacturing cotton	do.	1836	Do. do. -	2 "	Do.
South Kingston	Peacedale factory -	Isaac P. Hazard -	18	Manuf. woollen cloth	do.	1832	Troy company, N. Y.	3 "	Do.
Do. -	- - -	Joseph P. Hazard -	18	Do. -	do.	1832	Do. do. -	2 "	Do.
Do. -	Peacedale wagon fac'y	T. J. Armstrong -	4	Manuf. wagons, &c.	do.	1837	T. J. Armstrong -	1 "	Do.
Do. -	Rocky Brook factory	J. D. Williams -	6	Manuf. woollen goods	do.	1836	Prov. steam-engine co.	2 "	Do.
Do. -	Great Neck mill -	L. H. Arnold -	12	Sawing lumber -	do.	unkn'n	Do. do. -	2 "	Do.

DISTRICT AND PORT OF NEWPORT, *Collector's Office, Aug. 7*, 1838.

WILLIAM LITTLEFIELD, *Collector.*

E 6.

COLLECTOR'S OFFICE, *Providence, November* 15, 1838.

SIR: I herewith forward a return of locomotives on the Stonington railroad, just received from Mr. Whistler, engineer and agent, in addition to my return of the 29th October.

Very respectfully, your obedient servant, W. R. DANFORTH, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

E 7.

***Return** of steam-engines used on railroads in the district of Providence; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June* 29, 1838.

Name of railroad.	Name of locomotive.	Power.	High or low pressure.	Where constructed.	By whom constructed.	How long in use.	Remarks.
New York, Providence, and Boston Railroad.	Stonington	10 tons weight 13,250 lbs. on driving-wheels 54 inches diam. of driving-wheels 12-inch cylinder 18-inch stroke	High	Lowell, Mass.	"Proprietors of locks and canals."	1 year.	As the velocity of these engines is not a constant quantity, and as the power to generate steam varies also with the velocity, it is difficult to estimate the *horse-power*, as is done with stationary engines. Assuming the velocity of the piston of the large engine at 220 feet per minute, with the maximum load due to the adhesion of the weight on the driving-wheels, $\left(\frac{13,250}{6}\right)$ and that the boiler is capable of supplying steam to work up to this, (which is the case,) they would rate 69 horse-power. The load would move at 11.75 miles per hour.
	Rhode Island	Do.	Do.	Do.	Do.	Do.	
	Apponaug	8½ tons weight 11,550 lbs. on driving-wheels 5 feet diameter of driving-wheels 11-inch cylinder 16-inch stroke	Do.	Do.	Do.	Do.	
	Greenwich	Do.	Do.	Do.	Do.	Do.	
	Little Rest	Do.	Do.	Do.	Do.	Do.	
	Pawcatuck	Do.	Do.	Do.	Do.	Do.	

GEORGE W. WHISTLER, *Engineer and Agent.*

COLLECTOR'S OFFICE, *Providence, October* 5, 1838.

SIR: I herewith forward a return of steam-engines in use in the district of Providence, exclusive of those used in steamboats and on railroads; also, a return respecting steam-engines used in steamboats in the same district, agreeably to the requisition in your circular of 12th July last.

Having had no returns to the letters I addressed to numerous manufacturers, I was under the necessity to employ an agent to obtain the required information, and shall forward a bill for the amount paid for his services to the Auditor.

There are several locomotives on the road from this district to Stonington, and a person employed by me has made repeated applications to the proper officers attached to that railroad, to procure the information required, but without effect. A desire to obtain this has prevented an earlier return from me. Should I become possessed of that information, it shall be promptly transmitted. Very respectfully, your obedient servant,

W. R. DANFORTH, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

E 9.

Return respecting steam-engines used in steamboats in the district of Providence; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of vessel.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Name of master or commander.	Name of engineer.	Power of engine, horses.	High or low pressure.	By whom engine constructed.	When eng. constructed.	How long in use.
			Ft. in.	Ft. in.	Ft. in.											
John W. Richmond.	From Providence to New York.	487	202 2	23 10	10 4	Providence.	1837	J. S. Eddy	J. W. Richmond, and others.	William H. Townsend.	Jas. Barker	215	Low	J. Babcock	1838	4½ mo.
Providence -	District changed.															
Kingston -	District changed.															

COLLECTOR'S OFFICE, *District of Providence, R. I., Sept.* 25, 1838. W. R. DANFORTH, *Collector.*

Return of all steam-engines in use in the district of Providence, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	Time used.
								Years.
Providence -	High street furnace -	Wood & Holden -	10	Stove-castings -	High	1831	John Babcock	7
Do. -	Elm street manufacturing company.	Allen & Burke -	25	Negro cloths -	do	1836	Do	1½
Do. -	Chair factory - -	T. Parker - -	6	Chair manufacture -	do	1836	Do	1½
Do. -	Phœnix iron foundry -	Phœnix Company -	14	Iron foundry and machine shop.	do	1837	Phœnix Company	1
Do. -	Iron foundry - -	A. & T. Fuller -	10	Iron foundry -	do	1836	J. Babcock	2
Do. -	Providence dying & bleaching company.	Smith, Bosworth, and others.	200	Bleaching, coloring, finishing.	do	1826	John Clark	12
Do. -	Providence steam-mill -	Slater & Co. -	70	Cotton cloth -	do	1827	Fairbanks, Clark, & Co.	11
Do. -	Providence print works -	John Jenckes & Co. -	30	Calico printing -	do	1825	John Babcock -	12
Do. -	Eagle mill - -	John Waterman & Co.	40	Cotton cloth -	do	1811	Starbuck & Elliot	7
Do. -	Steam-engine manufactory	Clark, Fairbanks, & Co.	4	Steam-engines -	do	1827	Clark, Fairbanks, & Co.	1
Do. -	Tobacco manufactory -	Samuel Billings -	4	Tobacco manufacture	do	1836	John Babcock -	1½
Do. -	Prov. steam-engine manuf.	John Babcock & others	8	Steam-engine manuf.	do	1834	Do - - -	4
Do. -	Distillery - -	Joseph Adams -	4	Distillery of rum -	do	1836	Do - -	1½
Do. -	Tingley marble factory -	S. Tingley - -	8	Marble - -	do	1838	Do - -	8
Do. -	Canal machine shop -	Humphrey & Proctor	6	Machinery - -	do	1836	Do - -	2
Do. -	Charles st. canal bleachery	Rhodes & others -	60	Bleaching - -	do	1832	Do - - -	6
Do. -	Screw factory - -	John Gorham -	10	Screw manufacture -	do	1830	Do - - -	6
Do. -	Print engraving - -	John Kavanah -	4	Engraving for calico printing.	do	1829	Do - - -	4
Do. -	Coleman block manufactory	Walter Coleman & Son	6	Manufacturing blocks	do	1834	Do - - -	3

Do. -	Talman & Bucklin's planing shop.	Talman & Bucklin -	20	Planing boards -	do	1832	Do - - -	6
Do. -	High street woollen manuf.	Jos. Grant & Co. -	20	Woollens - -	do	1835	Do - - -	1
Johnston -	Simmons's mill - -	James F. Simmons -	45	Cotton cloth and printing cloth.	do	1838	Fairbanks, Clark, & Co. -	2ms.
Do. -	Abbott & Bliss print works	Abbott & Bliss -	40	Printing cloth -	do	1837	Do - - -	1 y'r.
Do. -	Almy's cotton-mill -	Samson Almy -	40	Cotton cloth -	do	1834	J. Babcock - -	4
Cranston -	Hunt's print works -	Benjamin Hunt -	8	Printing cloth -	do	1837	Do - - -	1
Do. -	Turner's cotton-mill -	S. & S. Turner -	6	Cotton batting -	do	1837	Do - - -	1
Do. -	Sprague's print-mill -	A. & W. Sprague -	60	Calico printing -	do	1836	Do - - -	2
North Providence	Dye-wood mill - -	William Chase -	12	Cutting dye-wood -	do	1836	Clark & Fairbanks -	2
Pawtucket, Mass.	Franklin print works -	Jacob Dunnell -	80	Printing cloth -	Low	1836	J. Babcock - -	2¾
Attleboro' east side Blackstone river.	Home print works -	Royal Sibley -	10	Printing cloth -	High	unkn'n	Made in New York, maker not known.	5
Smithfield -	Arnoldville print works -	Arnold & Weeden -	10	Printing cloth -	do	1835	J. Babcock - -	3
Do. -	Harris lime-rock - -	Harris Lime-rock Co.	10	Pumping water -	do	1829	Built in Boston - -	6
Do. -	Dexter lime-rock - -	John Dexter -	10	Pumping water -	do	1834	Do - - -	3
Warwick -	Crompton mills - -	Assignees of Benjamin Cozzens.	100	Cotton-mill - -	do	1833	John Babcock - -	2ms.
Coventry -	Cook's bleachery - -	William M. Cook -	15	Bleaching cotton cloth	do	1828	New York, maker's name not known.	4 y's.
Providence -	Allen's print works -	Philip Allen -	25	Calico printing -	do	1834	J. Babcock - -	4

COLLECTOR'S OFFICE, *District of Providence, R. I.,*
September 25, 1838.

W. R. DANFORTH, *Collector.*

NEW YORK.

F 1.

CUSTOM-HOUSE,

New York, November 19, 1838.

SIR: In obedience to the circular from the Treasury Department, under date of July 12, 1838, directed "to the respective collectors of customs and to the surveyors of certain ports," I have given "especial attention to the inquiries contained in the annexed resolution of the House of Representatives."

[Here follows a copy of the resolution.]

In pursuance of the views expressed by you, I took immediate measures to obtain the required information, and for that purpose I caused copies of the said resolution to be printed and put into the hands of various individuals, whom I believed would be able and willing to furnish much of the information which seemed to be sought for. Having waited some time, and being satisfied that either from other avocations, or want of sufficient interest on the part of those from whom I had anticipated aid in my efforts to comply with your instructions, I should not receive such aid, I employed, under the general authority delegated by the circular, Captain Elihu S. Bunker, who had, for a period of nearly thirty years, as commander or builder of steamboats, been connected therewith, to seek the information which I was required to furnish from this district. His reports accompany this communication; that which answers the first and eighth subdivisions of the resolution of the House of Representatives is marked (A,) and that which applies to the second, third, fourth, fifth, sixth, seventh, and eighth subdivisions of said resolution, is marked (B.) It is proper, however, to add, that these reports do not exactly correspond with the form prescribed by you, or give all the information required by the resolution. The report (A) does not give "the names of the owners, and masters or commanders, and engineers," as required by the said eighth subdivision of the resolution; for it is next to impossible to state, in all cases, the names of the owners of steamboats, for they do not appear on the records of this office; and in many instances the boats belong to incorporated companies, in other instanees to private associations, and the names only of the trustees appear in the register or enrolment; and in other instances transfers of interests are made out, and no notice of the same is given to the custom-house.

It will appear by report (B) that the following disasters have occurred in this district and the waters adjacent, by explosion of steam-boilers, to the number of 15, and occasioned the loss of about 60 lives, viz:

First.—An explosion on board steamer Atalanta, in 1816. She was a new boat, built at Elizabethtown, New Jersey.

Second explosion.—Steamboat "Raritan," running between New York and New Brunswick, in the year ——, at the wharf at New York.

Third explosion.—Steamboat Bellona, passing from New Brunswick, New Jersey, to New York.

Fourth explosion.—On board small boat named Patent, on board of which Daniel Dod was making experiments on a boiler with high-pressure steam.

Fifth explosion.—Was on board the Etna, on her passage from New Brunswick, New Jersey, to New York, in 1824.

Sixth explosion.—Jersey ferry-boat, running from Courtland street, New York, to Jersey city, New Jersey.

Seventh explosion.—Steamboat Constitution, in 1825, by collapse of the flue, near Poughkeepsie, New York.

Eighth explosion.—Legislator, running on North river.

Ninth explosion.—On board Oliver Ellsworth, running from Hartford to New York.

Tenth explosion.—Steamboat United States, on passage from New York to New Haven, running in competition with another boat.

Eleventh explosion.—The boiler of the General Jackson exploded in 1831, at Grassy point, in Haverstraw bay, on North river, New York.

Twelfth explosion.—Boiler of the Chief Justice Marshall, near Newburg, New York.

Thirteenth explosion.—The boilers of the New England, in the Connecticut river, both burst.

Fourteenth explosion.—The steam-chimney of the Ohio gave out on her passage from New York to Albany, in 1832. One man killed; the engineer not on board.

Fifteenth explosion.—In 1836 the boiler of a small boat, the Advocate, running between Hudson and Albany.

The only explosion on land, of which I have been able to acquire any information, is that referred to in the report of Captain Bunker, marked (B,) as the engine used in the foundry of Robert McQueen, in the city of New York.

The detail of the causes and manner of the several explosions, and the extent of injury produced, will be found in the report of Captain Bunker, marked (B.)

It cannot be expected that I should be able to express any opinion, from my personal knowledge, of the subject inquired about; yet it may not be improper to remark, that, from the great experience of Captain Bunker, I consider his opinions entitled to great respect.

In addition to sending copies of the resolution, as before stated, I prepared and issued the following from this office:

CIRCULAR.

CUSTOM-HOUSE,

Collector's Office, New York, July 16, 1838.

SIR: The undersigned has received instructions from the Secretary of the Treasury of the United States to make inquiries, and to report to him, for the use of the Congress of the United States, the following facts:

1. The number of locomotive engines used on the road of which you are president.
2. The names of the same.
3. The power of the engine, and whether high or low pressure.
4. When and by whom constructed.
5. How long each has been in use.
6. Such additional remarks as would be calculated to elicit information for public use, or convey intelligence to Congress, in relation to the subject, in all its branches.

The undersigned is also instructed to inquire and make "*a return respecting steam-engines used in steamboats,*" and to procure information to the following facts:

1. The name of the steamboat, and where employed.
2. Tonnage, length from stem to stern, breadth at the broadest part, and depth from spar-deck to keel.
3. Where, when, and by whom built.
4. Names of owners, masters, and engineers.
5. Power of engine, and whether high or low pressure.
6. When and by whom the engine was constructed, and how long it has been in use.

The undersigned is likewise instructed to inquire and make "*a return of all steam-engines used in this district, exclusive of those used in steamboats and on railroads.*" He is desirous of being able to make his report at as early a day as practicable, and to that end he has taken the liberty to request you to furnish such information as you have in your power, and feel willing to communicate.

Respectfully, your obedient servant,

J. HOYT, *Collector.*

I caused this circular to be directed to the following railroad companies, viz: Harlaem Railroad Company, Utica and Schenectady Railroad Company, Mohawk and Hudson Railroad Company, Hudson and Berkshire Railroad Company, Saratoga and Schenectady Railroad Company, Renselaer and Saratoga Railroad Company, Brooklyn and Jamaica Railroad Company, and Long Island Railroad Company.

Also, to the following ferry companies: Fulton Ferry Company, Canal Street Ferry Company, Christopher Street Ferry Company, Barclay Street Ferry Company, Courtland Street Ferry Company, Catharine Street Ferry, Company, South Street Ferry Company, Walnut Street Ferry Company, Grand Street Ferry Company, and Peck Slip Ferry Company.

And also to the following-named individuals: William McCammon, Hawk street, Albany; William V. Mang, Beaver street, Albany; Albert Dweble, Union street, Albany; James Goold, Union street, Albany; Packer & Prentiss, Water street, Albany; John Gibson & Co., Water street, Albany; George Russell & Brother, Water street, Albany; O. G. De Graff, Water street, Albany; John Rodgers, Lumber street, Albany; Pruyn & Barker, Dean street, Albany; Howard & Ryckman, South Market street, Albany; John Taylor, Leyden street, Albany; Brown & Webster, South Market street, Albany; Joel Rathbone, South Market street, Albany; Robert Boyd, Arch street, Albany; Elisha W. Vose, Herkimer street, Albany; John Gott, Middle lane, Albany; Chapman & Sargeant, Market street, Albany; Hoffman & Potts, Halenbake street, Albany; Wells & Thomas, Hudson street, Albany; Isaac Burton, Washington street, Albany; John Losswig, Washington street, Albany; Packard & Van Benthuysen, South Market street, Albany; J. & J. Gibson, Eagle street, Albany; Rousseau & Easton, West Troy; William Tewel, engineer steamboat De Witt Clinton, Albany; John King, engineer steamboat North America, Albany; Allen Studwell, engineer steamboat Swallow, Albany; Edson Spencer, engineer steamboat Rochester, Albany; John Andrews, engineer steamboat Utica, Albany; Alderman Henry Williams, chairman ferry committee, Albany; Nathaniel Starbuck & Sons, Troy; and Nelson, Hart, & Gibbons, Albany.

I regret to say that only five of the railroad companies have answered the inquiries, viz: the Harlaem Railroad Company, the Utica and Schenectady Railroad Company, the Saratoga and Schenectady Railroad Company, the Long Island Railroad Company, and the Brooklyn and Jamaica Railroad Company.

The returns in relation to these roads appear in schedule hereto annexed, marked (C.) The two latter are continuous roads, the management of which is under the same individuals; and the same engines run over both roads.

From the other persons and companies to which the circulars were addressed, I have received written replies from the following, viz: the agent of steamboat Swallow; the engineer of steamboat Rochester; J. &. J. Gibson; Packard, Van Benthuysen, & Co.; John Gibson & Co.; and New York and Brooklyn Ferryboat Company.

Though all the information given in their communications is substantially contained in the reports of Captain Bunker, I nevertheless send you the letters for perusal, to be used as you may deem best. They are marked from No. 1 to No. 6, inclusive.

In relation to the ninth subdivision of the resolution, I have to state that I addressed a letter to Captain James Hosken, of the steam-ship Great Western, and to James C. Shaw, Esq., a very distinguished engineer of Great Britain, who came to this country in the steam-ship Royal William, as the agent of one of the most extensive associations in England, in the business of transportation by steam.

The answer of Captain Hosken is sent herewith, (marked No. 7;) and the "log of the Great Western," referred to by him, is marked No. 8.

I have not yet received an answer from Mr. Shaw, but I presume it was sent by the steamer Liverpool, which has not yet arrived, but is hourly expected; and if the answer should come by that vessel, it will be immediately forwarded to you.

I might here close my report in relation to the subject embraced in the resolution of the House of Representatives; but, in a great degree connected with that subject is the "Act to provide for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam;" in relation to which I was especially directed by the Treasury Department to see its provisions complied with. In conformity with these directions, I issued, on the 3d of August last, the following circular:

CUSTOM-HOUSE,

Collector's Office, New York, August 3, 1838.

The undersigned has received from the Treasury Department of the United States a certified copy of a law approved the 7th day of July last, entitled "An act to provide for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam," (a copy of which is annexed,) with instructions to take immediate measures, within the limits of this district, to make the owners and masters of vessels, propelled as above, acquainted with the nature of the provisions of said law, and of the absolute necessity of their being complied with on or before the 1st day of October next; and also of the settled determination of the Department rigidly to adhere to all of these provisions, so far as depends upon the power conferred by law upon the officers of Govern-

ment. In furtherance of the desire of the head of the Treasury Department to carry out the will of the Legislature, as expressed in said law, the undersigned hereby gives notice of its provisions, and of the instructions he has received in relation thereto; the execution of which, so far as devolves upon him, will be promptly enforced.

J. HOYT, *Collector.*

In pursuance of the provisions of that law, I prepared a form for enrolment and license, copies of which I now forward, marked (D) and (E.)

From the efforts I have made to acquire the information called for by the House of Representatives, I flattered myself I should have been able to make a more full and satisfactory report upon a subject that has become interesting to the community, from the deep affliction that has been visited upon numerous families by the negligence or want of skill in those who have had charge of the powerful but useful agency of steam; but I forbear to comment on the omission of those who have failed to contribute their portion to that general stock of information which has been required from the high authority under which you as well as I have acted; and as I am unacquainted with the motives which have led to that omission, I will not undertake to pass a censure which all might not consider as just towards those who have failed to answer the inquiries which have been addressed to them.

I am, sir, very respectfully, your obedient servant,

J. HOYT, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

(A.)—*A list of steam-vessels coming into and sailing from the port of New York.*

Names of vessels.	Captains.	Tons and 95ths.	When built.	Where or by whom built.	High or low pressure.	Materials of which boilers are made.	How and where employed.
Arrow	Isaac Smith	290 86	1837	Lawrence & Sneeden	Low	Iron	Passage-boat on the Hudson river.
American Eagle	Richard Peck	186 26	1834	Lawrence & Sneeden	Do.	Iron	Passage-boat on the East river.
Albany	James Benson	398 88	1826	J. Vaughn	Do.	Iron	Passage-boat to Albany.
Augusta	C. Vanderbilt	218 56	1838	Bishop & Simons	Do.	Iron	Passage-boat along shore.
Benjamin Franklin	Not in operation	419 00	1828	Brown & Bell	Do.	Copper	Rhode Island line.
Belle	William H. Peck	430 04	1837	Lawrence & Sneeden	Do.	Iron	Not in operation.
Bunker Hill	F. B. Sanford	356 43	1833	Hartford	Do.	Iron	Passage-boat to Hartford, Connecticut.
Boston	Wm. H. Townsend	344 00	1831	Brown & Bell	Do.	Copper	Wilmington, North Carolina.
Cinderella	J. Degroot	145 86	1832	Bishop & Simons	Do.	Copper	Passage-boat to Elizabeth Port, New Jersey.
Champlain	Adolphus Gorham	471 35	1832	Brown & Bell	Do.	Iron	Passage-boat to Albany, New York.
Cleopatra	J. B. Dustan	402 84	1836	Bishop & Simons	Do.	Copper	Passage-boat to Hartford, Connecticut.
Clifton	C. Vanderbilt	175 33	1836	Bishop & Simons	Do.	Iron	Along shore.
Comet	R. Peacock	79 60	1836	Lawrence & Sneeden	Do.	Iron	Passage-boat up East river.
C. Vanderbilt	Gone Eastward	346 30	1837	Bishop & Simons	Do.	Iron	Boston and Portland.
Congress	Joseph Nelson	167 85	1825	Noah Brown	Do.	Iron	Tow and passage-boat on the Hudson.
Commerce	J. R. Brooks	371 67	1825	C. Bergh	High	Iron	Tow-boat to Albany.
Constitution	J. Hoyt	276 36	1825	Brown & Bell	Low	Iron	Tow-boat to Albany.
Charter Oak	M. Sanford	439 53	1838	From Hartford	Do.	Iron	Passage-boat to Hartford, Connecticut.
Caroline	Gone South	177 44	1836	Lawrence & Sneeden	Do.	Iron	Gone South.
Cuba	Gone to New Orleans	690 00	1837	Baltimore	Do.	Copper	Packet from New Orleans to Texas.
Charleston Packet	James Penoyer	569 15	1836	J. Vaughn	Do.	Iron	Hence to New Orleans.
De Witt Clinton	S. R. Roe	373 36	1828	M. Kenyon	Do.	Iron	Passage-boat to Albany.
Erie	James Benson	471 35	1832	Brown & Bell	Do.	Iron	Passage-boat to Albany.
Experiment	S. J. Tobias	136 58	1828	New Windsor	Do.	Iron	Passage-boat to Cornwells, New York.
Emerald	Trumpor	307 91	1825	Smith & Demon	Do.	Iron	Passage and tow-boat to Poughkeepsie.
Echo	Captain Scott	102 60	1837	Lawrence & Sneeden	High	Iron	Market-boat to Fort Washington, New York.
Frank	J. B. Coffin	175 14	1835	Lawrence & Sneeden	Low	Iron	Tow-boat to Catskill, New York.
Fairfield	E. Peck	230 90	1833	Smith & Demon	Do.	Iron	Passage-boat to Bridgeport, Connecticut.
Flushing	C. Lefevre	185 25	1832	Lawrence & Sneeden	Do.	Iron	Norwich, Connecticut, to Sag Harbor, N. York.

F 2—(A)—Continued.

Names of vessels.	Captains.	Tons and 95ths.	When built.	Where or by whom built.	High or low pressure.	Materials of which boilers are made.	How and where employed.
Hornet	H. Lawrence	429 45	1838	Lawrence & Sneeden	Low	Iron	Not in operation.
Hudson	Not in operation	170 89	1826	Brown & Bell	Do.	Iron	Not in use.
Highlander	Robert Wardrop	313 00	1835	Lawrence & Sneeden	Do.	Iron	Passage-boat to Newburg, New York.
Henry Eckford	Abraham Higham	153 34	1824	Lawrence & Sneeden	High	Iron	Tow-boat to Albany.
Illinois	A. Comstock	349 35	1837	William Brown	Low	Iron	Tow-boat to Albany.
Independence	—— Shultz	368 49	1827	Brown & Bell	Do.	Copper	Philadelphia railroad line.
John Jay	D. Schultz	131 82	1831	Brown & Bell	Do.	Iron	Tow-boat to Albany.
Jonas C. Heartt	Berdine Truesdell	179 12	1837	Brown & Bell	Do.	Iron	Passage-boat from Troy to Albany.
John Mason	W. W. Tupper	180 00	1834	Brown & Bell	Do.	Iron	Passage-boat from Troy to Albany.
James Madison	Eli Perry	325 22	1836	J. Vaughn	Do.	Iron	Passage-boat to Newburg.
James Fairlie	M. Stoughten	100 20	1831	J. Smith	Do.	Iron	Tow-boat on the Hudson river.
John W. Richmond	William H. Townsend	520 00	1837	Providence, R. I.	Do.	Iron	Passage-boat from New York to Providence.
General Jackson	J. Mapes	174 12	1828	Noah Brown	Do.	Iron	Passage-boat to Kingston, New York.
Lexington	J. J. Vanderbilt	488 87	1835	Bishop & Simons	Do.	Iron	Passage-boat to Stonington, Connecticut.
Legislator	Thomas Newbery	170 70	1825	Noah Brown	Do.	Iron	Passage-boat for Hudson, New York.
Maria	Samuel Gordon	81 00	1834	Brown & Bell	Do.	Iron	Passage-boat to Rahway, New Jersey.
Mount Pleasant	T. Gillespie	177 08	1835	J. Smith	Do.	Iron	Tow-boat to Albany.
Massachusetts	Joseph J. Comstock	626 71	1836	Brown & Bell	Do.	Copper	Rhode Island packet.
Napoleon	Isaac Fisher	169 39	1829	Smith & Demon	Do.	—	Passage-boat to New Brunswick, New Jersey.
Norfolk	H. B. Murray	254 26	1826	Philadelphia	Do.	Iron	Passage-boat to New Windsor, New York.
New York	J. Wright	365 54	1836	Brown & Bell	Do.	Iron	Charleston packet.
Newark	B. Tate	162 53	1830	Brown & Bell	Do.	Iron	Hoboken ferry-boat.
North America	George Lathrop	497 27	1827	Wm. Capes	Do.	Iron	Passage-boat to Albany.
New Haven	Joel Stone	342 86	1835	Lawrence & Sneeden	Do.	Iron	Passage-boat to New Haven, Connecticut.
New York	Bartlet Stone	520 00	1836	Lawrence & Sneeden	Do.	Iron	Passage-boat to New Haven, Connecticut.
Norwich	Wm. W. Coit	346 45	1836	Lawrence & Sneeden	Do.	Iron	Passage-boat to Norwich, Connecticut.
New London	A. Hitchcock	181 04	1825	Brown & Bell	Do.	Iron	Tow-boat to Albany, New York.
Nimrod	John Brooks	291 00	1833	Smith & Demon	Do.	Iron	Passage-boat to Bridgeport, Connecticut.
Natchez	William Story	861 23	1837	Baltimore	Do.	Copper	Packet between New York, and Natchez, Miss.
Novelty	J. Sherman	477 45	1830	Hyde Park	High	Iron	Passage-boat to Albany, New York.
Neptune	C. Wilson	622 00	1837	Lawrence & Sneeden	Low	Iron	Charleston and Baltimore packet.
New York	Elijah Richards	304 74	1826	Philadelphia	Do.	Iron	Tow-boat to New Brunswick, New Jersey.

Narraganset -	George Child	576 48	1836	William Brown -	Do.	Iron -	Passage-boat to Stonington, Connecticut.
Orange - -	Isaac Tallman -	122 73	1834	Nyack - -	Do.	Iron -	Passage-boat to Nyack, New York.
Osiris - -	B Allaire - -	145 15	1838	Lawrence & Sneeden	Do.	Iron -	Passage-boat to Cranberry, New Jersey.
Oceola - -	Albert Degroot -	281 18	1838	William Brown -	Do.	Iron -	Passage-boat to Fishkill, New York.
Oliver Ellsworth -	J. T. Haviland -	262 70	1824	Henry Eckford -	Do.	Iron -	Tow-boat to Albany, New York.
President - -	Not in operation -	615 29	1829	Brown & Bell -	Do.	Copper	Rhode Island line.
Providence -	Charles A. Woolsey -	330 00	1832	Brown & Bell -	Do.	Copper	Rhode Island line.
Passaic - -	M. Ross - -	291 55	1837	Wm. Capes -	Do.	Copper	Passage-boat to Newark, New Jersey.
Providence -	Francis Bogardus -	140 21	1823	Newport, R. I. -	Do.	Iron -	Passage-boat from Newburg to Albany, N. Y.
Rhode Island -	Seth Thayer -	588 71	1836	Brown & Bell -	Do.	Iron -	Rhode Island line.
Rockland - -	William H. Allen -	107 29	1830	Nyack - -	Do.	Iron -	Passage-boat from Hudson to Albany.
Robert L. Stevens -	M Bartholomew -	298 86	1835	Kingston - -	Do.	Iron -	Passage-boat to Albany.
Rufus King -	Richard Yates -	131 41	1828	Smith & Demon -	Do.	Iron -	Tow-boat at New York.
Rondout - -	John Skinner -	40 58	1832	Poughkeepsie -	High	Iron -	Tow-boat at Rondout.
Rochester - -	A St. John -	440 00	1836	Smith & Demon -	Low	Iron -	Passage-boat to Albany.
Swallow - -	Alexander McLean -	426 00	1836	Wm. Capes - -	Do.	Iron -	Passage-boat to Albany.
Statesman - -	Richard Peck -	128 00	1835	Lawrence & Sneeden	Do.	Iron -	Passage boat, East river.
Sun - -	James Lane - -	159 16	1836	Lawrence & Sneeden	Do.	Iron -	Passage-boat, East river.
Stonington -	Gone Eastward -	211 11	1834	J. Williams - -	Do.	Iron -	Ferry-boat at Providence, Rhode Island.
Swan - -	William M. Jenkins -	353 20	1827	Smith & Demon -	Do.	Copper	Philadelphia rail-road line.
Star - -	S. Leonard - -	102 48	1836	Lawrence & Sneeden	Do.	Iron -	Passage-boat up East river.
Sandusky - -	L. W. Brainard -	289 22	1825	Coxsackie - -	Do.	Iron -	Passage and tow-boat to Albany.
Superior - -	James H. Leeds -	194 63	1830	Brown & Bell -	Do.	Iron -	Passage-boat to Newburg.
Swiftsure - -	H. L. Murray -	265 25	1825	C. Bergh - -	High	Iron -	Tow-boat to Albany.
Splendid - -	Not in operation -	210 00	1832	Lawrence & Sneeden	Low	Copper	Passage-boat to New Haven, Connecticut.
Telegraph - -	J. S. Odell - -	243 14	1837	Lawrence & Sneeden	Do.	Iron -	Passage-boat to Sing Sing, New York.
Trenton - -	W. Schultz - -	328 45	1825	Brown & Bell -	Do.	Iron -	Philadelphia railroad line.
Thistle - -	Joseph Barnes -	202 52	1824	Smith & Demon -	Do.	Copper	Railroad line to Philadelphia.
Utica - -	B. Truesdell -	340 69	1837	Wm. Capes - -	Do.	Iron -	New York and Albany, for passengers.
Union - -	H. Tuthill - -	201 80	1833	Bishop & Simons -	Do.	Iron -	Sing Sing and Peekskill, passengers.
United States -	Abram Hitchcock -	180 15	1821	J. Williams - -	Do.	Iron -	Tow and passage-boat to Albany.
Victory - -	John Adams -	290 65	1827	M. Kenyon - -	Do.	Iron -	Tow-boat from Rondout, for coal.
Water Witch -	Jacob Van Pelt -	207 05	1831	Smith & Demon -	Do.	Copper	Passage-boat to Elizabeth Port, New Jersey.
Warren - -	J. Mansell - -	252 12	1836	Nyack - -	Do.	Iron -	Passage-boat to Nyack.
Washington -	G. L. Dolson -	258 85	1833	Haverstraw - -	Do.	Iron -	Passage-boat to Haverstraw.
Wave - -	Oliver Vanderbilt -	242 94	1838	Bishop & Simons -	Do.	Iron -	Tow-boat for harbor of New York.
West Chester -	Henry McDougal -	230 00	1832	Smith & Demon -	Do.	Iron -	Passage-boat to Hudson.
Wadsworth -	M. Stoughten Storts -	90 15	1830	Providence, R. I. -	High	Iron -	Tow-boat in Albany.
William Young -	Charles Dubois -	187 93	1831	Low Point, N. Y. -	Low	Iron -	Passage-boat to Low Point.

F 2—(A)—Continued.

A list of the names of ferry-boats in the collector's district of N. York.

Name of boats.	Where employed.
Relief	On Fulton ferry to Brooklyn, Long Island.
Fulton	Do. do. do.
Olive Branch	Do. do. do.
William Cutting	Do. do. do.
Independence	On Catharine-street ferry to Brooklyn, Long Island.
Constitution	Do. do. do.
Manhattan	Do. do. do.
Brooklyn	On South ferry to Brooklyn, Long Island.
Jamaica	Do. do. do.
New York	Do. do. do.
Long Island	On Peck-slip ferry to Williamsburg, Long Island.
Williamsburg	Do. do. do.
Daniel Jackson	On Grand-street ferry to Williamsburg, Long Island.
Noah Waterbury	Do. do. do.
Henry Remsen	Do. do. do.
Star	On Walnut-street ferry to Navy Yard, Long Island.
Pluto, and Experiment	On Hurl-gate ferry to Hallett's Point, Long Island.
Gold Hunter, and Phenix	On Newburg ferry to Fishkill, New York.
Jack Downing	On Caldwell's ferry to Peekskill, New York.
Albany and Greenbush	On Albany ferry to Greenbush, New York.
Chancellor Lansing	Do. do. do.
Essex	Foot of Courtlandt street to Jersey City, New Jersey.
Sussex	Do. do. do.
Washington	Do. do. do.
New Jersey	Do. do. do.
Hoboken	Foot of Barclay street to Hoboken, New Jersey.
Fairy Queen	Do. do. do.
Pioneer	Do. do. do.
Newark	Do. do. do.
Bolivar, Samson, and Hercules	To Staten Island, New York.
Dutchess and Ulster	From Poughkeepsie to New Paltz, New York.
Hudson and Athens	From Hudson to Athens, New York.

There are on land in this district about sixty small high-pressure engines, used in factories, forges, and foundries, for blowing, and generally very plain machines, too small to require a minute description.

NEW YORK, *November* 18, 1838.

ELIHU S. BUNKER.

J. HOYT, Esq., *Collector, New York.*

F 3—(B.)

SIR: Agreeably to your request, I proceed to give you an account of the different kinds of steam-engines and steam-vessels employed within or coming into your district, how employed, &c.; also, an account of the explosions that have taken place in this district, and the causes of those disasters; loss of lives, and other accidents, from the bursting of steam-boilers, as near as my information, experience, and judgment will permit.

On land, there are about sixty small high-pressure engines employed in factories, and used in forges and foundries, for blowing; but all of them are too small to require a very minute description: they are generally very plain machines.

I do not find that more than one serious accident ever happened amongst them, and that was to one that Robert McQueen had in use in his foundry, at the corner of Cross and Duane streets, for blowing. By the neglect of the engineer who had charge of it, the water became too low in the boiler; in consequence of which, while the engine was shut for a few minutes, the steam was raised to a great height inside, and it exploded, and was broken into several pieces, a part of which went across the street into the front room of a house, and injured a woman who died of the wound. One man was killed outright.

There are one hundred and thirty-one steam-vessels within and running into your district, which the preceding table (A) will show. Rather more than half of these vessels have come under my eye, as inspector under the late law of Congress of the 7th July, 1838.

In regard to the loss of lives and great loss of property by the explosions of steam-boilers, fifteen happened within your district, and not less than sixty lives were lost thereby. The first explosion happened on board the Atalanta, in 1816, while lying at the wharf in this city. This was a new boat, built at Elizabethtown, New Jersey, and, when finished so far as to be able to put the engine in operation, came up to this city without a steam-gauge, or any other index by which to ascertain the height of steam in the boiler—the engineer trusting to his judgment, by lifting the safety-valve by the lever with his hands to ascertain the strength of the steam, the valve being overweighted. The consequence was, that one end of the boiler, which was but a little distance from the partition which separated it from the forward cabin, was blown out, and killed two children that were in the forward cabin, who were passengers, and going to Elizabethtown to school. This explosion I consider the most inexcusable of any accident that I have ever known to happen on board a steam-vessel, inasmuch as it is at all times unsafe to raise steam on a boiler without a proper indication of the power that might come upon it; besides, the boiler was not strong enough for the purposes for which it was intended to be used.

The second explosion was on board of the steamboat Raritan, running to New Brunswick, and owned by John R. Livingston. An inexperienced engineer had charge of the machinery and boiler. The safety-valve was said to have been fastened down. While the boat was at the wharf in this city, the man was lying on a bench in the fire-room, or was in a berth near it, when the pressure in the boiler (perhaps not more than ten or twelve inches) caused a brace-bolt to break that was in the front end of the boiler, of about one inch diameter, that caused the water to pass with great force into the fire-room. He fell into the hot water from fright, or in attempting to get out of the room, and was so scalded as to cause his death soon after. Although this man was incapable of doing the duty of an engineer, it was evident that the boiler was deficient in strength, and not fit for use.

The next explosion was on board the Bellona, on her passage from New Brunswick to New York. It did not appear that the pressure in the boiler was greater than twelve or fourteen inches; but it had few or

no braces, and the copper was entirely too thin: therefore this boiler was too weak to be pronounced fit for use. One man lost his life by this explosion.

The next explosion was on board of a small boat called the Patent, on board of which Daniel Dod was making some experiments on a boiler with high-pressure steam. It was a miserably weak boiler; and he having put on a greater power than it was capable of sustaining, the end was blown out. Mr. Dod and several others lost their lives by this explosion. The want of skill was evidently the cause of this disaster. Mr. Dod was a steady, sober, ingenious, and industrious man, always being at the head of his business himself.

The next disaster was on board the Etna, while on her passage from New Brunswick to this place, in 1824. This was a most awful explosion. Her boilers were of sufficient strength to bear the pressure designed to be put upon them; but she was a high-pressure boat, and was built and put into operation for the express purpose of running in fresh water on the Delaware, but, by some change of business, she was brought round to run on this navigation, in salt water. Five or six lives were lost by this explosion, and I think four of them were of one family. No one has, to my knowledge, accounted for this explosion—at least, not in a satisfactory manner. For myself, I never had but one opinion as to the real cause. There were three boilers lying horizontally and parallel to each other, bedded in a brick foundation, with steam-pipes and feed-pipes connecting them together, and the passages to the boilers in the feed-pipes were very nearly closed with the sediment or collection of salt and plaster of Paris. That leading to the middle boiler must have been so far closed as not to supply it with a sufficient quantity of water to meet the action of the fire to which it was exposed—it being, from its position, of course, exposed to the hottest part of the furnace. When the supply was cut off from it by the stoppage of the passages mentioned above, and the water began to fall, it must have been almost instantly converted into steam of a very high temperature, sufficient to raise it from between the other two, notwithstanding the fastenings. It was broken into two pieces nearly in the middle; one part went overboard, and the other lodged on the deck, near the ladies' cabin, on the starbbard side. I examined the passages of the feed-pipes, and found them nearly closed up with the substances before mentioned. As this boiler was fastened down more strongly than either of those that were on the outside, and it having escaped from between them, leaving them nearly in their former position, I think I have fully accounted for the explosion from the power of steam created inside of the boiler by the action of the fire upon it, without having a proper check upon it by the feed of water. This accident must have happened more for want of skill and experience than from carelessness or neglect, as it was, in that day, very difficult to prevent the effects of salt water from injuring steam-boilers, of whatever kind of metal they might be made.*

* I was the first person who discovered the means of preventing the destruction of steam-boilers by the deposite of the plaster of Paris and salt on the flues, by the very simple process of repeatedly changing the water through the feed-pipes. The accumulation of this deposite in the flues, inside of the boilers, it is well known, prevents the water from protecting the metal of the flues from the action of the fire in the furnace. Much time and money were spent in the endeavor to prevent the injury from salt water, before accident led me to the discovery of this very simple preventive.

Soon after this time, the boiler of the Jersey ferryboat "Jersey" exploded. By this disaster a woman was killed outright, and the captain of the boat, who was standing on the float outside of her, was so scalded that he died of the wounds soon afterwards. This accident occurred, in my opinion, by sheer carelessness and neglect. The engineer or manager of the machinery and boiler had, by want of care and attention to his duty, let the water get too low, by which the back part of the flue was injured by fire. When the explosion took place, the boat was lying in the slip; and it was said (and I have no doubt of it) that the safety-valve was either tied down or overweighted, and the engineer on shore, and the steam raised to a height that caused the weak part that had been burnt to give way: the water falling on the extremely heated hearth, added to the power already inside, and the after-end of the boiler rising first, caused it to perform a complete summerset; having been tossed a considerable distance in the air, it fell bottom up, nearly in the same place it rose from.

In 1825, the boiler of the steamboat Constitution exploded by collapsion of the flue, when near Poughkeepsie. There were no braces in the boiler, and it appeared that there was not a sufficient quantity of water in it to protect the flue from the action of the fire; at any rate, the boiler was not strong enough for the purposes that it was used for. By this explosion, five or six persons lost their lives.

The next disaster was the collapse of the flue of the boiler of the Legislator. This explosion resulted from the weakness of the boiler, like that of the Constitution, from raising a greater pressure of steam upon it than it was capable of bearing, and with a view of racing with another boat. Several lives were lost by this explosion, and I am fully satisfied that it happened for the want of an experienced and prudent engineer. At the time it happened, the boiler was in charge of a colored man who was fireman. A new engineer having been engaged the same morning, went on board a few minutes before the accident occurred, and knew not what situation the boiler was in. This individual has, since that time, been found an efficient engineer.

The boiler of the Oliver Ellsworth exploded in Long-island sound on her passage from Hartford to New York. This accident happened by want of water in the boiler, said to have been caused by a mistake of the engineer. Several lives were lost by this explosion.

The next explosion that fell within my knowledge was the steamboat United States, on her passage hence to New Haven. She was, at the time, running in competition with another boat. The boiler was old, and, in many parts of it, worn very thin—in some places, not thicker than common stove-pipe sheet-iron. In this situation, it was not safe to carry upon it more than 3 or 4 pounds pressure; and yet it appeared that there was something like 14 or 15 pounds pressure before it gave way. Several persons were killed by this disaster. Those lives were evidently victims to the spirit of racing.

In 1831, the boiler of the General Jackson exploded while lying at the wharf at Grassy point, in Haverstraw bay. There were many contradictory accounts of the cause of this accident; the truest of which I believe to be, that the engineer raised more steam than the boiler was capable of bearing. At this time they were in competition with another boat, and probably held on the steam on that account. As the captain denied any knowledge whatever of there being an improper quantity of steam

in the boiler, I have come to the conclusion that the engineer had mistaken the gauge or had deceived him. The number of lives lost by this most awful explosion was never ascertained, but believed to be about fourteen.

The boiler of the Chief Justice Marshall exploded at or near Newburg. As the engineer was killed, it was never known whether it was caused by a deficiency of water in the boiler; but, from all the accounts that could be collected relating to this accident, there cannot be a doubt that it was caused by too great a pressure of steam operating upon the end of the boiler, which had little or no bracing or fastenings to any part inside; and it cannot be supposed the engineer had had much experience in the profession. Several lives were lost by this accident.

There was a most destructive explosion on board of the New England, on the Connecticut river, at a place called Essex; both boilers burst, and were blown almost instantly from their places, leaving the vessel almost a wreck. No satisfactory account of the cause of this explosion has ever met my eye, as having been given by any one that was on board; but the real cause, according to my view of the case, was, that there was a greater pressure inside of the boilers than they had strength to bear. It was said that the safety-valves were fastened down at the time, which, however, was denied by one of the owners; also, that there was a deficiency of water, over which the action of the fire at last became master, and the boilers were displaced by the power of steam alone. Had the boat been manned with skilful and experienced officers in all the departments, and proper attention given thereto, I am persuaded that this disaster would never have happened. There were several lives lost in consequence—I think five.

In 1832, the steam-chimney of the Ohio gave out while on her passage to Albany; one man was killed outright, who was standing between two others in front of the boiler, who did not receive the slightest injury. As the engineer of this boat was a skilful and prudent man, and a first-rate boiler-maker, he must have been deceived as to the real situation of this boiler previous to the explosion. He was not on board at the time of its occurrence.

In 1836, the boiler of a small boat plying between Hudson and Albany exploded, by which one or two lives were lost. This was a high-pressure boat, commanded by Captain William H. Allen. It appeared that neither the captain, owners, nor engineer, were acquainted with the situation of the boiler of this boat, which, from a state of decay, or want of strength in the materials of which it was made, was evidently not fit for use. This boat was called the Advocate.

There was a singular explosion on the river Thames in 1817. Gilbert Brewster, Esq., of Norwich, fancied that he was in possession of a plan for building a steamboat that would prove superior to that then in use, and accordingly built a small boat, (which I think he called the John Hancock,) into which he put a small engine and a wooden boiler. He prepared her for an excursion from Norwich to New London, at the time that President Monroe visited that section of the United States. Fifty gentlemen went on board, and they proceeded down the river from Norwich. Those fifty gentlemen, together with the cook, (a colored man,) were in the cabin abaft the boiler when approaching New London, when it was announced that the Fulton, which had the President on board, was in

The gentlemen went on deck as fast as the gangway would per-

mit them to move, the cook being the last at the foot of the stairs. When *he* was half-way up the stairs, the end of the boiler was blown out, and his left leg was slightly scalded. The force was so great with which the end of the boiler flew, that it swept every thing before it; tables, chairs, partition between the ladies' and gentlemen's cabins—all went out at the stern of the boat! In one minute more, if those persons had staid in the cabin, fifty-one would have been swept into eternity!

In all of the above-mentioned disasters, in no instance could either of them be called purely accidental; nor were there more than four instances where there was a want of water in the boilers. It is, therefore, conclusive to my mind that they were the result of a reckless disposition, the want of skill and experience, and the want of prudence, care, and proper attention in those having the charge of the vessel, the machinery, and the boilers.

There has been much speculation on the subject of explosions by many captains and owners of steam-vessels, (not forgetting chemists and other men of science,) in regard to the real causes of the explosion of steam-boilers, from time to time, as they have occurred. Some have averred that the engineers let the water get too low in the boilers, and, by letting cold water on too suddenly, cause immediate explosion. Others say that the water gets so low that the flues become red-hot, and, by jetting cold water upon the hot metal, create a gas that explodes the boiler instantaneously. Experience has taught me that this cannot be true. It must be remembered that all feed-pipes are attached to the bottoms of the boilers; therefore, if any water remains in the boiler at all, an injection of cold water into hot water must tend to cool or diminish the heat or expansive power in the boiler, rather than to increase it.

In 1811, I had command of the steamboat Hope, plying between New York and Albany. The engine and boilers were made and put in by Robert McQueen. On the second trip from New York, while Mr. McQueen's foreman had still the charge of the works on board, (they not having been delivered as completed,) this man had a gang of his own men from the shop, and, while proving the machinery, had a man that he was instructing to become engineer of the boat. While on the passage, off Esopus meadows, something appeared to be wrong in the fire-room, (which was in charge of a miserable drunken fireman, and the engine moving very slowly. I found, on examination, that there was not a drop of water in either of the boilers, and that both of them were red-hot, as well as the flues, and must have been so for at least half an hour. The heat was great enough to melt down five solder-joints of the steam-pipe, which was made of copper. I immediately started the forcing pump myself, not thinking that there could be any danger in the operation; the effect of which, was a crackling in the boiler as the water met the hot iron, the sound of which was like that often heard in a blacksmith's shop when water is thrown upon a piece of hot iron. I cannot, therefore, believe, for a single moment, that explosions are produced, to such a degree as I have before recited, by throwing cold water into a red-hot boiler. In the way above described, I cooled down both of the boilers, during which time neither of them jumped out of its place; nor do I see how it could be possible for such an effect to be produced, having always been of opinion that there could be no other cause for a boiler to burst than the pressure of steam inside, and not gas produced by jetting cold water or lukewarm water into it; for I deem it impossible for a red-hot boiler to contain heat enough to

explode with any quantity of water that might be suddenly thrown into it. Besides, it must be remembered that the supply-pipes are connected with the bottom of all steam-boilers, or are very near to the bottom; therefore, instead of producing explosion, the forcing cold or lukewarm water into hot water must have the tendency to cool it. For instance, I have known engineers to keep off their feed as long as they possibly dared, when running with another boat, knowing that as soon as they began to feed, the steam would fall, especially if they could not get a full supply of steam for the engine.

In November, 1812, I had command of the Phœnix, on the Delaware, owned by Colonel John Stevens. Having been called away on business by Colonel Stevens, after arriving at Philadelphia from Trenton, agreeably to the colonel's request, I directed the pilot to take the boat to Kensington for wood, and went ashore with him, the object of which was to purchase wood for the next day's use. After doing my business with Colonel Stevens, I went on board the boat at Kensington, and found her boilers (the same in number, size, and shape, as the Hope's) in the same situation of a red heat—of course, not a drop of water in them. I cooled them down in the same manner that I did the Hope's, and was about them the whole time myself; the same sound was heard, on throwing or forcing the water into them, as when I cooled down the Hope's. No damage was done to those boilers to prevent the boat from making her regular trip the next morning. I should remark here, that the boilers were iron in both cases, as they would have been nearly destroyed by the action of the fire if they had been copper. From the experience that I had in the cases above cited, and since that time, the practical experience in constant command of a steam-vessel for twenty-four years, and a part of that time under severe and trying circumstances, I have come to the conclusion that in all cases where a steam-boiler has exploded, it was by a pressure of steam on the inside beyond what it was capable of sustaining; nor do I believe that the formation of gas had any connexion with it, unless high, strong steam is the substance; nor have I ever known, in the course of my practice, any accident of note to happen, where there was due care and attention in the management of the machinery and boilers of steam-vessels, or in factories on land; nor do I believe that serious accidents ever would happen with steam-boilers in the hands of sober, prudent, skilful, attentive men. Iron boilers have been very generally brought into use, principally on account of the great expense of copper materials in this country; and I have no doubt that many of the accidents that have happened in this district occurred from their being made of iron, so subject to rust and decay, or from using thin copper for economy; and I am persuaded also, that an iron boiler is not so well taken care of as a copper one.

In 1815, I put the steamboat Fulton in operation on Long-island sound, between New York and New Haven, being a strong, substantial vessel, capable of bearing an engine of 300-horse-power, although she had an engine of only 43-horse-power. This vessel was called "Bunker's folly" during the time she was building, and Mr. Fulton himself pronounced her a total failure more than one hundred times, and, to my great annoyance, he reiterated these expressions to his friend Mr. Colden, who had employed me, with full powers, to build this vessel for the Sound navigation, and whose whole fortune was involved in the enterprise. This vessel exceeded the most sanguine hopes and expectations of her owners and

their friends. In 1816 I built the steamboat Connecticut, which was about the same size, and having nearly the same power. Both of them were afterwards put on the line between New York and Providence.

In 1824 I built the steamboat Washington, into which I put two engines, each working separate from the other, believing this to be a safer and better plan. I had several years before suggested this plan to Commodore Hull for a steam-vessel of war. On this plan the new frigate Fulton is built, with the exception that the wheels are not secured, as I proposed, from the shot of the enemy.

In 1828 and 1829 I built the Benjamin Franklin and the President, each having two separate engines.

The hulls of those vessels were sufficiently strong for sea navigation. All of them had strong copper boilers, and the hulls of the Fulton and Connecticut were built by Adam & Noah Brown, and the Washington, Benjamin Franklin, and President, were built by Brown & Bell; all of them were built in the same yard, in the city of New York. I have been thus minute in speaking of those vessels, as my whole steamboat life commenced with building the Fulton in 1813, (at a time when it was thought the height of madness and folly to attempt to build a boat for sea navigation, even for Long-island sound!) and ended with the steamer President, occupying a space of twenty-four years, during which time I was constantly engaged with one or another of them, and never met with an accident of note, particularly in regard to the boilers and machinery; pursuing one straight-forward course of care and attention to the works.

In regard to the use of spirituous liquors on board of steamboats, the crews (of such as were under my command) were never, to my knowledge, laid under any particular restrictions; nor was it ever considered necessary, as we always had steady, sober, and experienced officers and engineers. I have some reason to believe that, in one case of explosion, the manager of the engine and boiler had indulged too freely.

The fate of the steam-packet Home was the most awful and melancholy of any that occurred from this port. It was evident that this vessel was never seaworthy, or fit for use on the navigation between New York and Charleston; and I believe she had never, while building and fitting up, an experienced and skilful superintendent—in my opinion, so indispensably necessary in building and equipping a steam-vessel.

Although not called upon to give an opinion in regard to the kind of materials of which the majority of marine steam-boilers are composed, I feel constrained to make some remarks on that subject, and hope they will not be unacceptable to you.

From my first commencement of building and commanding steam-vessels, I have always used copper boilers, and experience has taught me that they are safer and more durable, and by far more economical, than iron; indeed, with *care* and *attention*, (and nothing is safe without,) they will never wear out; whereas iron is continually oxydizing, and cannot be considered safe after two years' use, and that, under great care and attention, with expensive repairs. Even in using boilers in water entirely fresh, I think economy is in favor of copper; and, when a copper steam-boiler is made in a strong workmanlike manner, as they make them at the present time, they are safe to carry four times the pressure that is carried on the boilers of the "Great Western." I may add, that I was greatly astonished when I found that this noble ship had iron boilers in-

stead of copper! coming from a country, too, where a copper boiler would cost only about as much as an iron one would here. These iron boilers, from the manner in which they are necessarily used, cannot last longer than two years, to be considered safe; and I have no doubt, after a fair trial, that they will adopt the use of copper boilers.

It may be proper for me to remark, that there are but five of the boats, in which explosions occurred, now in operation in these waters, viz: Constitution, General Jackson, Oliver Ellsworth, United States, and Legislator. They are used as market and tow boats, and the crews entirely changed. The preceding table (A) will show the names of the boats, age, by whom built, and how they are employed, as far as can be ascertained.

In regard to the disasters that have so frequently happened, many preventives have been proposed, many new kinds of machines, new inventions offered for the purpose of ascertaining when the water is too low in the boilers, &c.; but I am steadfast in the opinion that any kind of plan or invention that is calculated to lessen the *direct attention* of the engineer to the boilers and machinery, would increase the danger of explosions, rather than diminish it; and there cannot, in my opinion, be any danger of bursting the boiler of a steamboat that is in charge of a skilful, prudent, attentive, and experienced engineer—and all steam-packets ought to have them. The old-fashioned way of ascertaining the height of water in the boiler, when attended to, never was known to fail of being safe: that is, to have the plain gauge-cocks, and a good watch upon them. Those who continue in this practice, I believe, will never be indicted for blowing up a steam-boiler by which lives will be lost. In 1831, the steamer Washington was run down by the Chancellor Livingston, and sunk off Milford, Connecticut, in Long Island sound. This collision, and the total loss of the Washington, was entirely the want of an experienced master and pilot on board the Chancellor. The Chancellor was bound from Providence to New York, and the Washington from New York to Providence, R. I. It was the custom agreed upon by the different owners and masters of steamers, afterwards confirmed by a law of the State of New York, each to keep to the right when passing. At the time above mentioned, the Chancellor Livingston was commanded by a young man who had turned in below, or in his state-room; the pilot, for some cause, staid at home that trip; the man who had charge of the wheel attempted to pass on the wrong side, and produced the concussion. It did not appear, under any examination had afterwards, that any blame could be attached to the master or crew of the Washington. The engineer of this boat was killed.

The steamboat Sun, owned by the Messrs. Mowat, of New York, was burnt off Sandy Hook, in consequence of the falling of her chimney, which was not properly braced—another instance of the want of attention and experience in managers. The crew was saved, but the boat entirely lost.

The following is a list of the boats and their masters, on board which the explosions herein referred to took place:

Atalanta,	———.
Raritan,	Moore.
Bellona,	C. Vanderbilt.
Patent,	D. Dod.
Etna,	Robison.
Jersey,	West.

Constitution,	Ricketson.
Legislator,	———
Oliver Ellsworth,	Havens.
United States,	Beecher.
General Jackson,	J. J. Vanderbilt.
Chief Justice Marshall,	Ford.
New England,	Waterman.
Ohio,	Bartholomew.
Advocate,	Allen.

The distance of time from the first accident, the death of many of the persons employed, and the frequent changes in owners, officers, and crews, in addition to the fact that but five of the boats on board of which explosions occurred are now in use, will account for any deficiency of detail that may be apparent in this report; and it is therefore submitted in the present shape, as the best which, under the circumstances, I can present.

ELIHU S. BUNKER.

To J. Hoyt, Esq.

F 4—(C.)

Return of steam-engines used on railroads in the district of New York; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Utica & Schenectady company.	Nos. 1 to 12	9½ tons, or about 8-horse power.	High	1835 and 1836	M. W. Baldwin, of Philadelphia.	No. 1 to 4, 26 mths 5 to 8, 18 " 9 to 12, 6 "	In shop two stationary high-pressure engines, one of five, and the other of ten-horse power, used two years.
Saratoga & Schenectady.	Fire Fly and Davy Crockett.	12 horse	Low	1832 and 1833	R. Stephenson and Co., of England.	Both in constant use since 1833.	There is one steam-engine used in the village of Saratoga Springs, in the chair-making shop of Ransom Cook.
Long Island railroad.	Hicksville, Post Boy, and Ariel.	[Power not given.]	High	1836	Hicksville made at the Lowell manufactory; Post Boy and Ariel by M. W. Baldwin, of Philadelphia.	Have all been in use two years.	
New York & Harlaem railroad.	New York, Harlaem, Yorkville, and Manhattanville.	20-horse	High	1837 and 1838	H. R. Denham & Co., N. York city.	They have alternately performed service for an average of nearly six m'ths.	

F 5—(C.)

OFFICE OF THE LONG ISLAND RAILROAD COMPANY.

SIR: In answer to your inquiries in your circular of the 16th of July, (received this day,) I have to reply, we have three locomotives used on the road: names, Hicksville, Postboy, and Ariel; all high pressure. The first-named made at the Lowell manufactory; the two last by Baldwin, of Philadelphia. All made in the year 1836. Have all been in use two years. They run over 27 miles of road, from Brooklyn to Hicksville.

Yours, respectfully,

W. B. POST,
President Long Island Railroad Company.

TO JESSE HOYT, Esq.,
Collector.

F 6—(C.)

OFFICE OF THE NEW YORK AND HARLAEM R. R. CO.

SIR: I duly received your circular on the subject of locomotives and other steam machinery, and had collected some facts in relation to such as are in use upon our road as I considered of consequence in their construction, but, owing to pressing engagements, have been unable to devote the necessary time, in order to obtain from other sources confirmation of what I had intended to state for the information of Government.

To your *first* inquiry, I answer that we have four locomotives on our road, two of which have been in constant use since the early part of last winter, performing a service of nearly 100 miles each per day, consuming about one cord of pine wood (boatman's measure, being about $\frac{7}{8}$ of a full cord) for each 40 to 50 miles of distance travelled.

Second. Their names are New York, Harlaem, Yorkville, and Manhattanville, being the names of the several settlements upon our island which our road is intended to pass through.

Third. The power of the engines is 10½ inches inner diameter of the driving cylinders by 16-inch stroke, with driving wheels of about 3 feet 9 inches diameter. Like all other locomotive engines with which I am acquainted, ours are constructed for high-pressure steam. We use steam in the present service upon our road, varying from 50 to 80 lbs., and very rarely 90 lbs. to the square inch, as indicated by the gauge-plate. With a train of six cars, and 250 to 300 passengers, we exert a power of about 20 horses.

Fourth. Our four engines were all constructed and put in use at the close of the year 1837 and early part of the year 1838, and were made by H. R. Dunham & Co., of North Moore street, in this city.

Fifth. They have alternately performed service for an average of nearly six months. During the interval from the time of their manufacture, each of them has been occasionally taken off the road for repairs, the heaviest expense of which has been incurred in consequence of the fracture of the driving axles at the inner angles of the cranks. Welding of an iron shaft of 4½ to 5½ inches diameter appears to be a very difficult work, especially

where it is applied to the angles of cranks; for we have tried various establishments of high reputation, and find them all faulty and incompetent for the performance of such service as is required upon our road. I have no practical information in regard to other steam-engines than the locomotives on our road, and can therefore make no useful or satisfactory reply to the remainder of your inquiries.

With every apology for my delay in transmitting this answer, I remain, most respectfully, your obedient servant,

ABRM. R. LAURENS,
Prest. of the New York and Harlaem Railroad Co.

JESSE HOYT, Esq.,
Collector of Customs for district of New York.

F 7—(C.)

ALBANY, *October* 9, 1838.

SIR: Your circular of the 16th July last was received by me a few days since. In answer to your inquiry, I have to state—

1st. The Utica and Schenectady Railroad Company have in use twelve locomotive engines.
2d. The names are, Nos. from 1 to 12.
3d. The power or class is 9½ tons of high pressure.
4th. Constructed by M. W. Baldwin, of Philadelphia, in the years 1835 and 1836.
5th. Have been used, No. 1 to 4, 26 months.
Do. 5 to 8, 18 do.
Do. 9 to 12, 6 do.

We have in our shop two stationary high-pressure engines, one of five and the other of ten-horse power, which have been used two years.

I am, with much respect, your obedient servant,

ERASTUS CORNING,
President Utica and Schenectady Railroad Co.

J. HOYT, Esq., *Collector.*

F 8—(C.)

SARATOGA SPRINGS, *October* 13, 1838.

SIR: Your circular of the 11th July last, addressed to the president of the Saratoga and Schenectady Railroad Company, was handed me yesterday. I take the earliest opportunity of answering the interrogatories it propounds, so far as this road is concerned.

Answers to interrogatories.

No. 1. Two.
2. Fire-Fly; Davy Crockett.
3. Twelve-horse power; low pressure.
4. In 1832–33, by R. Stephenson & Co., Newcastle-upon-Tyne, England.
5. *Both* have been in constant use since 1833–34.

There is one steam-engine used in this village, in the chair-making shop of Ransom Cook.

Very respectfully, &c.

JOHN COSTIGAN,

Superintendent Saratoga and Schenectady Railroad.

JESSE HOYT, Esq., *Collector.*

F 9.

ALBANY, *October* 19, 1838.

SIR: We received your circular, in relation to steam-engines, last week. In reply, we have to say that we have in use in our plane-factory an engine of five-horse power, high pressure. The engine was constructed principally by Messrs. J. & J. Townsend of this city; the boiler by James Rogers. The boiler is 24 feet long, and 28 inches diameter. We burn anthracite coal. The engine has been in use about 10 years, the boiler 4. We weigh the steam at 120 pounds per inch; when we apply machinery enough to require the above-mentioned quantity of steam, the engine does as much work as is usually allowed for a seven-horse-power engine. We consider it perfectly safe, because our boiler is of the cylinder kind; and, consequently, not so liable to explosion as those that have pipes and flues attached. The principal use we make of the power is driving circular saws.

Respectfully, yours,

J. & J. GIBSON.

Mr. J. HOYT.

F 10—(No. 7.)

GREAT WESTERN,

At sea, September 21, 1838.

DEAR SIR: In replying to your letter of the 15th ultimo, stating that you are "required by the Treasury Department to make certain inquiries in relation to steam-engines," &c., and requesting my "general views upon a subject at this moment so interesting to the people of both hemispheres," I cannot assist you more effectually than by drawing your attention to appendix No. 1 in the accompanying logs of the first voyage of the "Great Western," being a report to a committee on the subject of foreign steam navigation; which report was made by gentlemen of talent, after mature inquiries into all matters connected with steam navigation, engines, fuel, speed, &c.; and the successful voyages of the Great Western have more than realized all they believed could be accomplished.

By appendix No. 2 you will perceive that the size of the ship and power of the engines were increased beyond the original proposition; and my experience convinces me that this ship is more fitted for her work in consequence of that increase.

The model of the "Great Western" appears to me the best that can be

devised for sea purposes, as she combines great speed with perfectly easy movements; in fact, gales of wind have proved her, without exception, the finest sea-boat I have ever been on board of.

The machinery working under deck (as the Great Western's does) I think absolutely necessary for *Atlantic* steam navigation.

The boilers being four in number, gives the opportunity of remedying any casualty without stoppage. They are on low-pressure principle, being worked at 3½ lbs. on the inch. They have what we call change or brine pumps attached to them, which are in constant operation, being worked by the engines, and have hitherto effectually prevented accumulation of salt, and kept them clean.

There is nothing new in the construction of our engines.

Our paddle-wheels are on an improved principle, called cycloidal, and I have found them well adapted to sea purposes. They are stronger than the old plan; and from the float-board or bucket being divided, it does not hold back water, nor give the ship that tremulous motion which is not only disagreeable but injurious. There is also less chance of their being broken, so divided, than if made of one piece.

It is, I believe, proposed by our Government to legislate on steamboats, and appoint inspectors, with authority to examine them at their pleasure, or at stated periods; which I think important and highly necessary.

We have no laws for the regulation of our crews distinct from sailing-ships, but each commander has his own regulations for the arrangement of his particular crew.

The most important thing is to obtain a good chief engineer, (particularly in ships employed as the Great Western,) and then look to him for proper discipline in the sub-engineers, firemen, and coal-trimmers, as well as for attention to economy of fuel, engines, boilers, &c.

There have been a great variety of schemes proposed in England, recently, for improvement in boilers, engines, modes of generating steam, &c.; but as none of them have stood the test of time, I do not think them worthy of notice for your purpose.

I shall at all times be happy to give you any information in my power; and if at any time you will *propose queries* on the subject of steam affairs, (which appears to me the best mode of proceeding,) I will give you the best answers my experience renders me capable of giving, consistent with my duty to the company by whom I am now employed.

I remain, dear sir, very faithfully, yours,

JAMES HOSKEN.

J HOYT, Esq.,
Collector of Customs, &c., New York.

F 11—(D.)

License of a steamboat, or vessel, to carry on the coasting trade for one year.

No. —.

District of the port of New York:

In pursuance of an act of the Congress of the United States of America, entitled "An act for enrolling and licensing ships or vessels to be employed in the coasting trade and fisheries, and for regulating the same:"

———, *Collector.* having given bond that the steamboat called the whereof the said is master, burden tons as appears by her enrolment dated at New York, this day of , 18 , shall not be employed in any trade while this license shall continue in force, whereby the revenue of the United States shall be defrauded; and having sworn that the requisitions of an act entitled "An act to provide for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam" have been complied with, and that this license shall not be used for any other vessel, nor for any other employment than hereby specified, license is hereby granted for the said steamboat to be employed in carrying on the coasting trade for one year from the date hereof, and no longer.

Given under our hands and seals of office, at the custom-house this day of , in the year one thousand eight hundred and thirty-eight.

———, *Naval officer.*

———

DISTRICT OF NEW YORK, PORT OF NEW YORK.

Oath on obtaining a new license for a vessel.

I, , do solemnly swear that I am a citizen of the United States, and that the license for the steamboat shall not be used for any other vessel, or any other employment than that for which it is specially granted, or in any trade or business whereby the revenue of the United States may be defrauded.

Sworn to, before me, this day of 1838.

Collector.

———

F 12—(E.)

ENROLMENT.

PERMANENT.

No. —.

Enrolment, in conformity to an act of the Congress of the United States of America, entitled "An act for enrolling and licensing ships or vessels to be employed in the coasting trade and fisheries, and for regulating the same."

———, *Collector.* of the State of New York, having taken or subscribed the oath required by the said act, and having sworn that the requisitions of an act entitled "An act to provide for the better security of the lives of passengers on board of vessels propelled in whole, or in part, by steam," have been complied with; and also that , citizen of the United States, and sole owner of the steamboat or vessel called the , of , whereof is at present master; and, as he hath sworn; is a citizen of the United States, and that the said steamboat or vessel was built at , State

of . in the year one thousand eight hundred and , as per : this enrolment granted according to an act of Congress of the 7th of May, 1838.

And having certified that the said steamboat or vessel has deck and mast , and that her length is . her breadth . her depth , and that she measures tons ; that she is a square-sterned steamboat, has . no galleries, and head; and that the said having agreed to the description and admeasurement above specified, and sufficient security having been given according to the said act, the said steamboat has been duly enrolled at the port of New York.

Naval officer.

Given under our hands and seals, at the port of New York, this day of . in the year one thousand eight hundred and thirty- . ———.

———.

F 13.

NEW YORK. *December* 6, 1838.

SIR: I arrived in town late last evening, having been absent ten days, when I found your letters, one of the 26th ultimo and the other of the 1st instant, with the Secretary's letter to you enclosed, concerning the tonnage of the ferry-boats and also the steamer Home. In regard to the ferry-boats, I was engaged the most part of the time for two weeks in trying to find the tonnage of these boats, and did not succeed in finding the measurement of any but the Hercules. I frequently called at the surveyor's office, but I could not find any account of them; and without the measurer it was impossible to find their tonnage, as they had never been registered, the former law not requiring it: I therefore gave you the best account of them that was possible to be obtained. I think the table I gave you mentioned the tonnage of the Hercules, 191 tons. The Secretary states the disaster of the steamboat Home to have been passed over. In the account of disasters that I handed you, the Home was very particularly mentioned, and that part was read over by Mr. Mumford and myself afterwards, at the custom-house. I regret that it is missing, as I have no copy of it; the substance of it, however, was as follows:

"The fate of the steamer Home was the most awful and melancholy of any thing that ever occurred from this port. The hull was built by Brown and Bell, for account of James P. Allaire, who fitted her up and put her in operation on the Charleston line on his own account. It did not appear that this boat was under the superintendence of any man who was experienced in the construction of steam-vessels of any sort; and in no respect was she seaworthy, or fit to be used in the navigation between New York and Charleston."

I therefore considered this act the most wanton exposure of human life that has fallen within my knowledge. My opinion of the inability of is vessel was expressed to the joiner who finished her cabins on the day t she sailed the last time from here.

I am, very respectfully, yours,

ELIHU S. BUNKER.

. *Hoyt, Esq., Collector, New York.*

F 14.

CUSTOM-HOUSE,

District of Buffalo Creek, (N. Y.) November 12, 1838.

SIR: In compliance with your circular of the 12th day of July, 1838, accompanied by a copy of the resolution passed on the 29th day of June last, by the House of Representatives, I have the honor to report as follows:

The resolution to which my especial attention was called is as follows:

"*Resolved*, That the Secretary of the Treasury be required to collect and report to Congress, on the first day of the next session, all the information that can be obtained as to the use of steam-engines in the United States, and the accidents and loss of life or property which have attended their use; and especially that he ascertain and report—

1. The whole number of steam-engines in the United States; where and by whom they were constructed; where they are used; how long they have been used; their capacity or power, respectively; and the purposes or uses to which applied, and whether high or low pressure.

2. The explosions or other disasters which have happened to such engines; when and where; with as many of the circumstances attending the same as can be collected.

3. The causes, as far as they can be ascertained, of such explosions or other disaster.

4. The loss of life or property, or injury to persons or property, which has ensued in each case, distinguishing the mode of injury, by burning, scalding, wounding, drowning, or otherwise.

5. The disasters to steamboats; when, where, and how they have occurred, by explosion, collision, fire, or otherwise; the size, capacity, or burden of the boats; their age, and where and by whom built.

6. How such steamboats were manned, and whether intoxicating liquor was served out to, or permitted to be used by, the hands or persons employed on board the same.

7. The names of the owners and masters or commanders of the boats to which such disasters have happened, and of the officers and crews thereof.

8. In the case of boats to which no disasters have happened, the burden and size of the same; when, where, and by whom built; and the names of the owners and masters, or commanders and engineers.

9. Any such other information as may seem to him material."

Finding it impracticable to obtain the materials for this report without assistance, I employed Mr. Horatio Gates as a special agent, and am happy to acknowledge my obligations to him for most of the important facts stated in this paper.

The information called for under the first and eighth branches of the resolution will be found imbodied in the table herewith transmitted.

The whole number of steamboats now enrolled in this district is thirteen, all of which have submitted to the inspection of their hulls and engines, and machinery, pursuant to the provisions of the late act of Congress. The whole number of vessels propelled by steam, which are employed in the navigation of lake Erie and the upper lakes, and of the navigable streams connected therewith, is about sixty. The whole number of steam-vessels enrolled in this district since the commencement of steam navigation does not exceed thirty. It is a gratifying fact that no

disaster resulting in the loss of life has ever occurred to any steamboat now enrolled here. The Daniel Webster, while frozen up in the Buffalo harbor, in the winter of 1835, was burnt nearly to the water's edge; this was, no doubt, the work of an incendiary. Collisions have occasionally taken place, and resulted in litigation. Shafts, walking-beams, and other parts of the machinery of our steamboats, have occasionally failed; but these accidents have been rare, and productive of injury to none but the owners; and it would be almost impossible to collect the particulars of each accident, and ascertain the amount of damage sustained, even if the importance of such information should be deemed sufficient to warrant the inquiry. The number of steam-engines used in this district on railroads is three, as appears by the tables; they are all employed on a railroad running from this place to Niagara falls, in the Niagara district. One death was occasioned by wounds received by falling upon the track, in the spring or summer of 1837. This accident, however, cannot be fairly attributed to the employment of steam power; no other fatal accident has occurred upon this road. The locomotive, in one or two instances, however, has run off the track; one or more of the passenger-cars have in several instances been drawn or thrown off; but while human lives have thus been placed in imminent danger, no very serious damage has been sustained. The locomotives have occasionally failed in consequence of some derangement of the boiler or engines; which derangements, in common with the other accidents above referred to, may safely be attributed not to any defect of the steam-engine, but to the unevenness of the track and the injudicious construction of the road.

As the boundaries of the district are legally marked and defined only by points on the Niagara river and lake Erie, I experienced some difficulty in fixing upon its inland limits, but finally fixed upon the northern line of Pennsylvania as its southern boundary, and included within it the western part of Genesee county and the counties, of Erie, Allegany, Chatauque, and Cattaraugus. Within these limits there are thirteen steam-engines employed in the propulsion of machinery, exclusive of those employed on steamboats and railroads. For an account of them I would respectfully refer to the tables. There may be, and probably are, others in this wide district which have eluded my inquiries, but I am confident that all of any importance are mentioned in the tables.

In the table of steamboats, the tonnage, length, breadth, depth, owners, and age of the boats, are taken from the records of this office; the names of the builders, place where built, masters, engineers, and all other particulars relating to the engines, were obtained from the owners, masters, and engineers of the boats. I am informed that the mode of estimating the power of an engine by horse-power, as it is termed, is uncertain, and fast falling into disuse; and that no two engineers or engine-builders can agree precisely in their mode of estimating it or in the results. In the tables, the power in horses has been set down at a mean rate when the engineers applied to have differed in their estimates. It is respectfully suggested that, in case Government should require a renewal of these inquiries, some other mode of estimating the power of the engine should be recommended; and I am informed by men familiar with the subject, that the most unerring measure of force is obtained by registering and comparing the diameter of the cylinder, the length of the stroke, and the mean *pressure of steam* upon the square inch.

The information called for under the second, third, fourth, fifth, sixth, and seventh branches of the resolution, must, of course, relate to the disasters happening to boats not registered in this district at this time, as it has already been affirmed that no disasters have happened to those now registered here, by which life or property has been destroyed, with the exception of the case of the Daniel Webster, already mentioned. There are, however, several boats once registered here, but which have either been laid up or have surrendered their papers, and enrolled in other districts, to which serious disasters have occurred. These are first treated of in the following statement:

WALK-IN-THE-WATER.—This boat was built at Black Rock, by Noah Brown, in 1818, and was the first steam-vessel that ever navigated these lakes. Her tonnage was 338$\frac{40}{95}$, length 135 feet, breadth 32 feet, depth 18 feet 3 inches. The owners were James B. Stuart, Nathaniel Davis, Asa H. Center, Ralph Pratt, James Durant, John Mads, Robert McQueen, Alexander McMuir, Noah Brown, and Samuel McCoun. She ran only three seasons, and was wrecked at Buffalo in a gale; no lives lost. Her papers were surrendered April 5, 1822, and her hull was then broken up. A lapse of eighteen years, in the midst of a changing population like that which has inhabited Buffalo during that period, renders it difficult, if not impossible, to obtain any further particulars of the wreck of this boat which can be deemed authentic.

SUPERIOR.—This boat was built at Buffalo by Noah Brown, in 1822, as a successor to the Walk-in-the-Water; tonnage 346$\frac{38}{95}$, length 126 feet, breadth 20 feet 8 inches, depth 10 feet 6 inches; owners the same as the Walk-in-the-Water, and the same engine was also put into her. The steamboat Superior was altered to a steam-brig, and enrolled as such April 19, 1825. In 1828 broke her engine off the harbor of Dunkirk in this district; no lives lost. She has since had her engine taken out, and been altered to a ship, bearing the same name, and used in the lumber trade between the ports at the upper end of lake Erie.

PIONEER—built at Black Rock, by Benjamin Winslow, in 1825; tonnage 124.$\frac{47}{95}$, length 98 feet, breadth 16 feet 9 inches, depth 8 feet ½ inch; owners Augustus S. Porter, Peter B. Porter, Sheldon Thompson, Robert McPherson, Joseph G. Norton, Donald Frazer, James L. Barton, John Thayer, Absalom Bull, Amos S. Tryon, Erastus Chapman, James Sloan, Peter R. Root, William McKnight, Augustus Porter, Albert H. Porter, Parkhurst Whitney, Zela Gray, James Ferguson, Matthias Bruen, and James Germain; William T. Pease, master. This vessel was twice wrecked—once at Grand river, Ohio, in November, 1825; raised and again enrolled July 13, 1826; again beached in a gale of wind near Chicago, year not known. Both these accident shappening beyond the bounds of this district, the particulars are not easily to be obtained.

WILLIAM PEACOCK—built at Portland harbor, Chautauque county, New York, in 1829, by Asa Standart; owners, Eliphalet Tinker, Joseph White, John McWhorton, Norman Kibbe, Joseph Farnsworth, Lyman Redington, Elias Mallory, Aaron Rumsey, William Britton, Howel Beedle, Jonathan Cass, Alanson Bishop, Asa Farnsworth, Ashel Lyon, Jesse Brooks, Hezekiah Tinkham, Moses Mack, A. Plumb & Co., Henry Baker, Samuel Barrett, Samuel A. Brown, George T. Camp, Elial T. Foot, Judah T. Budlong, Benjamin Evans, Titus Kellogg, Royal Kyes, Judah Tracy, John B. Dinsmore, Isaac S. Smith, Asa B. Meech, and Rufus S. Reed;

tonnage 120, length 102 feet, breadth 19 feet, depth 7½ feet; John Fleeharty, master; Thomas Wilkins, mate; Sylvanus Starring, engineer; engine constructed by Stockhouse, of Pittsburg, in 1830. The boat having run one season with a low-pressure engine, by Langdon, of Troy, which was found insufficient, new engine was high pressure, sixty-four horse power; had four boilers under deck. On the 16th of September, 1830, as this boat was leaving Buffalo harbor for Detroit, with passengers, and about two miles from the light-house, with a heavy sea ahead, broke her steam-pipe; by which accident fourteen lives were lost, mostly women and children, and all passengers. The steam-pipe was constructed of brasiers' copper, and broke in consequence of the spring of the boat, there being no sliding joint to accommodate the spring of the pipe to that of the boat; but no proof being found that the disaster was caused by wanton neglect, these attempts failed. The pipe passed through a small cabin, and, the weather being chilly, these unfortunate passengers were gathered in that cabin for the benefit of the heat from the steam which was led through the pipe. The same pipe was repaired, and the boat resumed her regular trips in a day or two, having made it perfectly safe by a slip joint. In 1832 the Peacock went ashore at Erie, Pennsylvania, by which her engine was considerably damaged, having been driven from her moorings at a small pier, in a gale of wind.

William F. P. Taylor—employed on lake Erie and Niagara river; tonnage 95$\frac{36}{95}$; built at Silver creek in 1835, by John McGowan; owners, William F. P. Taylor and Oliver Lee. In the autumn of 1836, took fire on her passage near the mouth of Cattaraugus creek. A young man employed on board jumped overboard in his fright, and was drowned. The boat was run into Irving harbor, and the flames were subdued; damage not ascertained. In the month of August last the Wm. F. P. Taylor was wrecked near the mouth of St. Joseph's river, in lake Michigan, having been driven ashore in a gale of wind; no lives lost.

New England—(for description see table) on the night of the 3d of this mouth, was driven ashore near Grand river, Ohio, with a valuable cargo, in a gale of wind; no lives lost. Amount of damage cannot now be ascertained.

The above are the only serious disasters, the particulars of which could be obtained, which have befallen vessels propelled by steam, hailing from any port within the district of Buffalo creek. The following have befallen vessels hailing from ports within other districts:

Commodore Perry.—This boat was built, owned, and enrolled at Perrysburg, Ohio; launched in 1834; Augustus Jones, builder; owners, the Perrysburg Steamboat Company; David Wilkinson, master; tonnage, 352$\frac{25}{95}$; length, 146 feet 2 inches; breadth, 26 feet 4 inches; depth, 9 feet 9 inches; has had but one engine, horizontal, high pressure, 180 horse-power, with boilers below deck; engine built by P. B. Andrews & Co., Cleveland, Ohio; has had two collapses of flues, both during the first year she ran. The first collapse happened 20th June, 1835, at Buffalo, while in the act of starting, causing one death (a colored cook) from scalding. The second disaster happened on the 20th of September, the same year, while taking passengers from on board the Daniel Webster, in Detroit river, at the request of the latter-named boat. By this collapse two colored hands and one white passenger were killed. Both collapses were in consequence of the defectiveness of the iron of which the flues were

constructed. New flues were then constructed, which have proved safe. The Commodore Perry has also suffered from two collisions with other boats; both, however, from the limits of this district. In October, 1836, she was run into by the steamboat Uncle Sam, in the latter part of the night, off Sandusky bay, by which one colored hand was instantly killed. The damages to the boat were computed at $500. Alleged cause, the carelessness of the steersman on board of the Uncle Sam. In the latter part of April, 1838, the Commodore Perry was again run into by the steamboat Buffalo; no lives lost; damages to property, $4,000; same cause alleged.

Washington.—It is something remarkable, that of two vessels propelled by steam upon lake Erie bearing this name, both have been lost on their first return-trip. Of the first bearing that name, I have been able only to gather that she was built, owned, and enrolled in some western district; that in 1835 she made her first trip; and on her way down broke her steam-pipes in a gale of wind, and was driven on shore on Long point, Upper Canada. Only one life was lost—a young man, who attempted to swim ashore after the boat was stranded, perished in the surf. The vessel was a total loss.

The Washington of 1838 was built and principally owned at Ashtabula, Ohio, and was enrolled in the district of Cuyahoga, Ohio. Of her dimensions, &c., we have only been able to ascertain that she was one of the first class of boats, no expense being spared to make her worthy of the confidence of the travelling public; her master, Mr. N. W. Brown, had the reputation of being every way equal to his employment. On Saturday, June 16, 1838, at two o'clock in the morning, in the vicinity of Silver creek, New York, the Washington, on her first trip down the lake, was discovered to be on fire beneath the boilers. Some pains had been taken, and much valuable time lost, in fruitless endeavors to extinguish the flames, before the passengers had been apprized of their danger. Had the boat been headed for the shore as soon as the fire was discovered, the fatal result to so many lives might have been averted; and had the passengers been apprized of their danger in their cool and wakeful moments, their presence of mind might have conduced to a less disastrous result. But aroused, as they were, from the midst of their soundest slumbers, by the cry of "fire," a scene of confusion and distress followed which cannot be described. Several passengers went into convulsions with terror on the deck, and remained insensible until they were enveloped in the flames of the boat. The head of the boat was turned towards the shore, distant only three or four miles; but the dreadful truth that the flames could not be arrested seemed to paralyze all exertion, and render futile every means of safety. At the frantic request of some of the passengers, the engine was stopped to allow a boat to be launched. This indiscretion was the fatal error. When the boat had been let down, the fire was found to have advanced so far as to render it impossible to put the machinery again in motion. Some small boats put off from the shore, and picked up a few individuals. Among those whose exertions in this way were particularly meritorious and effective, my late deputy at Silver creek, Captain George H. Grosvenor, was conspicuous.

The steamboat North America, Captain J. L. Edmonds, at the distance of nearly twenty miles, discovered the light of the fire, made for the spot, and succeeded in rescuing about fifty persons, who were in boats, and

floating upon fragments of the vessel, or swimming upon the lake. The number of lives lost cannot be correctly ascertained, but is variously stated at from forty to sixty. The general opinion is, that at least fifty lives were lost upon this sad occasion; and the number of bodies found, and the recollection of the survivors, warrant us in a conviction that the number is not exaggerated. Numbers precipitated into the water at the first alarm, and scarcely one of them reached the shore; even of those who succeeded, on pieces of board and firewood, in reaching the shore, many had so little presence of mind left as to be drowned in the attempt to land. Bodies were picked up, many days after the disaster, charred and partially consumed by the flames; and not a few, it is believed, were carried by the current into the river, and deposited in unfrequented places, or hurried over Niagara falls. The causes of this terrible disaster are, first, the imperfect manner in which the furnaces and boilers were laid; second, the deficiency in the means of ventilation, leaving the wood-work around the fires exposed to a heat which made it exceedingly susceptible of fire; third, the neglect to put the head of the boat towards the shore as soon as the fire was discovered; and, fourthly, the serious mistake in stopping the engine to let down the boat or yawl. It does not appear that the boat had been racing, or that her steam was imprudently high at the time; on the contrary, all the passengers, whose presence of mind would allow them the use of their judgment, concur in the opinion that the boat was moving very slow; and that her steam was very moderate, and had been so for several hours previous to the first alarm. On her trip up, her speed had been found to fall so far below the expectation of her owners and officers, that it would have been the height of folly to attempt competition with any boat of considerable speed. Her boilers, either from deficiency of fire surface, or some other cause, were found incapable of making steam as fast as the engine would use it; and the North America, which has not the reputation of being an extraordinary boat for speed, had, without any extraordinary effort, gained twenty miles of her in a few hours. Additional particulars relative to this catastrophe could, perhaps, have been procured, but not without incurring more travel and expense than their importance would have justified. There is not, to the knowledge of the undersigned, either any officer or hand, who belonged to the Washington, at present residing in this district. Our only information has been gleaned from passengers and agents, whose acquaintance with the dimensions of the boat, and the particulars relative to her engine, and other items of some importance, must, of course, be limited.

Under the sixth head, I am unable to state particularly how the steamboats, to which accidents have occurred, were manned, or whether intoxicating liquors were served out to the hands. On all our steamboats, however, (with one exception, perhaps,) a public bar has been always, and now is, permitted. None of the accidents and disasters, however, mentioned in this report, so far as I can ascertain, have ever been traced to the intoxication of any of the officers, engineers, or seamen.

Under the ninth head, it would, perhaps, be proper to offer a few suggestions as to the law of the last session of Congress, intended for the better security of the lives of passengers on board of vessels propelled in whole or in part by steam; and, in venturing them, I would remark that I merely represent the public voice as it has reached me. The law itself is highly important and beneficial; but, as it touched upon entirely new

ground, it could not be expected to attain perfection at once; and every one is bound in a matter of such general interest, to watch its operation, and contribute to supply its deficiencies.

The law, it appears to me, is defective in not making it the duty of some particular person or persons to see to its faithful execution. The informer is always odious, and to inform even for the public benefit is an ungrateful business. If particular persons should be selected, whose sworn duty it should be to complain of violations of the law, the odium would be removed; and I should suppose that custom-house officers and the inspectors under the act would be the most proper persons to sustain this responsibility.

Inspectors, under the law, are to be appointed from time to time, on the application of the master or owner of any steamboat, &c., for the purpose of inspecting a particular boat, with the inspection of which his authority terminates. This, at any rate, appears to me to be the true construction of the third section, though it has been departed from in practice. If two or more inspectors were appointed for a term of years, subject to removal by the power that appoints them, on cause shown, there would be less danger of the appointment of improper or interested persons. I see no reason why the owner of a steamboat should be permitted in any way to interfere with the selection of the judge who is to decide upon its efficiency for public use.

If the present system of appointing inspectors in each district is adhered to, would it not be well to require that each vessel should obtain certificates in the district where it is enrolled? I do not see that I could, under the law, refuse papers to a vessel whose owners should present me regular certificates issued in other districts; and yet I cannot have that confidence in men who live at a great distance, and who are perfectly unknown to me, which I repose in my neighbors, with whose qualifications I am perfectly familiar. And I am much more liable to be imposed upon by false and fraudulent papers as the law now is, than I would be if this alteration were made.

In the great chain of lakes, to guard against frauds, (which, as the law now stands, could easily be perpetrated,) would it not be well to declare the forgery of an inspector's name to a certificate, or the fraudulent alteration of a certificate, a felony; and, perhaps, to require the certificate to be under an official seal, the counterfeiting of which should be felony? Collection districts are so frequent, that competent inspectors cannot, in all cases, be obtained, if their compensation is limited to the present fees.

If the inspectors of each district are limited to its own vessels, the inspectors here could not realize more than from $65 to $150 a year. As they cannot be interested in the manufacture of steam-engines, &c., they must be debarred from a lucrative business, a knowledge of which is essential to qualify them for the office. Their compensation should be raised, either by a fixed salary, or, perhaps, in a better way, (as it would not entail a burden on the Treasury,) by limiting the appointment of inspectors to a few important points on the lakes; for instance, on this and the Western lakes, to this port and Detroit. The inconvenience of this change to steamboat owners would be trifling; the responsibility would be greater; and inspectors could afford to give the business a less divided and more diligent attention.

A slight accident or a defect in the machinery, which would escape

attention at first, may soon render its employment dangerous, and lead to the most fatal results. The engine, boilers, &c. may be perfectly sound to-day, but it does not follow that they will be safe for six months, or even to-morrow. Should not their inspection be more frequent? Would it not be well to require the inspectors to examine the engines, &c. of every boat at every trip, between her entering and leaving port? If the inspectors were salary officers, and this were part of their allotted duty, it would be cheerfully performed. The inspectors should have the power of cancelling their certificates for cause, or at least of entering their *caveat* in the collector's office against granting a clearance to a vessel, which had become unsafe after their certificates were given, until they should withdraw the *caveat*.

It is evident that the utmost fidelity of well-qualified inspectors cannot ensure the benevolent objects of the law, unless the engineers on board of the boats are temperate, able, and careful; and it has been suggested that no one should be allowed to be employed as an engineer, unless he could procure a certificate of his professional ability and good character from some competent person. As an examining board, perhaps the inspectors would be the best, as they would be the most convenient. I have been urged to suggest that it would be well, also, to give the inspectors power over the engineers, to prohibit their employment in case of misconduct, and to render the engineer independent of the master in the regulation of the power of the steam. It appears to me, however, that objections exist at least to the latter part of this proposition.

I have the honor to be, with the highest respect, your most obedient servant,

G. W. CLINTON, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of steam-engines used on railroads in the district of Buffalo creek; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Buffalo and Niagara Falls Railroad	Buffalo - -	30	High -	1835	At Lowell, Massachusetts -	2 years.
Do. do. -	Niagara - -	30	High -	1836	Dunbar & Co. New York -	2 years.
Do. do. -	Tonawanda - -	25	High -	1838	Baldwin, Philadelphia . -	3 months.

F 16.

Return respecting steam-engines used in steamboats in the district of Buffalo creek; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives.

Name of boat.	Names of owners.	Where employed.	Tons and 95ths.	Length.	Breadth.	Depth.
				ft. in.	ft. in.	ft. in.
Buffalo	Chas. M. Reed, Moses Baker, Joy & Webster, L. A. Spalding, and Oliver Newberry	Lakes	613 67	189 5	28 2	12 0
De Witt Clinton	J. L. Kimberly, S. Thompson, C. Townsend, G. Coit, J. Pease, D. Griffith, N. M. Standart, Sheldon Pease, R. H. Backus, G. F. Griffith, J. M. Griffith, H. Pease.	Lakes	413 00	147 0	27 2	11 0
Wisconsin	J. C. Evans, George F. Power, S. F. Gelston, J. B. Evans, P. M. Irving, Tuffts & Parks, S. L. Petrie, L. Gould, L. M. Hubby, O. M. Tomlinson, R. L. Noyes, E. W. Barnard.	Lakes	490 6	157 0	29 0	11 6
Robert Fulton	John Pease, Sheldon Thompson, John L. Kimberly, Charles Townsend, Geo. Coit, H. Pease, D. Griffith, N. M. Standart, R. Backus, Wm. T. Pease, John Chester, Tarleton Jones.	Lakes	368 43	139 8	26 6	10 8
Milwaukie	William Kemble	Lakes	401 40	172 0	24 0	10 1
Charles Townsend	J. Pease, J. L. Kimberly, S. Thompson, C. Townsend, G. Coit, Simeon Fox, N. M. Standart, D. Griffith, W. T. Pease, J. Chester, T. Jones, D. W. Douglass, John Z. Saxton, T. G. Abel, R. Robins.	Lakes	312 58	136 0	24 6	10 0
Daniel Webster	John R. Lee, J. Daws, John R. Carey, Pomeroy & Ball, M. T. Richards, S. Williams & Co., W. Brewster.	Lakes	358 10	128 3	24 0	11 2
Constellation	R. C. Palmer, G. W. Holt, G. K. Coates, R. Hunter, Q. Gilman, Aug. Jones, G. W. Jones, B. B. Jones, B. McKee, C. Leonard, T. Powers, J. H. McQueen, John Flaharty, William Law.	Lakes	483 60	150 6	28 6	12 1
Fairport	E. Norton, A. Cable, R. Harper, J. C. Oliver	Lakes	259 0	135 9	22 4	9 0
Barcelona*	E. R. Wilkeson, B. F. Craft, E. L. Tinker, M. Scoville	Lake Erie	102 42	97 0	17 6	6 7
Red Jacket	J. H. Lathrop, Stephen White, W. H. Sumner, F. J. Oliver, Lewis F. Allen	Niagara river	158 20	110 0	16 0	8 0
New England	R. Gilespie, J. Mayhew, Chas. Burnett, Wm. Woodruff, H. T. Meech, J. C. Delong, R. Vandewater, W. C. Rice & Co., L. L. Meech, S. Poupard.	Lakes	416 23	148 8	26 3	11 4
Constitution	Gilman Appleby, M. Kingman & Co., S. L. Petrie & Co., Gray & Gallagher	Lakes	440 52	140 9	28 1	11 10
William H. Seward†	Robert Falconer, Thaddeus W. Patchin, H. W. Lowry, Wm. H. Seward, E. L. Tinker, C. Rumsey, G. T. Camp.	Chautauque lake	100 0	96 0	14 0	5 0

F 16—Continued.

Where built.	When built.	By whom built.	Masters.	Engineers.	Power of engine, in horses.	High or low pressure.	By whom engine made.	When made.	How long engine in use.
									Years.
Buffalo - -	1838	John Carrick -	Levi Allen -	John Leonard -	200	Low	J. P. Allaire, New York - -	1837	1
Huron, Ohio -	1836	Fairbanks Church	A. H. Squires -	W. B. Gilbert -	90	High	Ward & Benne, Pittsburg - -	1836	2
Conneaut, Ohio -	1838	G. W. Jones -	Geo. F. Power -	—— Lockwood -	250	Low	Birbeck & Co., New York; first used in the Independence, and then in the Ohio, on the Hudson river. Boilers new in 1838.	1826	10
Cleveland, Ohio -	1835	Fairbanks Church	Robert Hart -	S. Starring -	90	High	Stackhouse, Pittsburg - -	1835	3
Grand Island -	1837	J. English -	Morris Hazard -	R. Evans -	150	Low	West Point foundry - - -	1837	1
Buffalo - -	1835	Carrick & Bidwell	Simeon Fox -	L. Stevens -	60	Low	R. McQueen, New York, formerly in Walk-in-the-Water and Superior.	1817	20
Black Rock -	1833	John Carrick -	Morris Tyler -	B. Dorret -	100	Low	J. P. Allaire, New York - -	1832	5
Charleston, Ohio -	1837	—— Jones -	P. Robinson -	John Hebard -	120	High	Birbeck & Co.; rebuilt at West Point, and first used in Constellation, on Hudson river 1835.	1824	12
Fairport, Ohio -	1838	G. Miles -	J. C. Oliver -	—— Mills -	60	Low	Ward & Benne, Pittsburg; first used in Delaware.	1835	3
Dunville, U. C. -	1836	Unknown -	Wm. Kennedy -	J. Howell -	30	Low	Ward Power, Montreal, L. Canada -	1834	2
Grand Island -	1838	John English -	J. H. Lathrop -	J. Cameron -	25	Low	West Point foundry; first used in Victory	1835	3
Black Rock -	1837	Jacob Banta -	Charles Burnett -	—— Lee -	60	Low	Birbeck & Co.; first used in H. Clay -	1824	12
Conneaut -	1837	G. W. Jones -	G. Appleby -	—— Doty -	130	High	Ward & Benne, Pittsburg - -	1836	2
Jamestown -	1836	Capt. Willson -	Wm. Langdon -	O. E. Hebard -	35	High	Ward & Benne, Pittsburg - -	1836	2

* Known by the name of Princess Victoria, while a British bottom.

† The steamboat William H. Seward is not entered or enrolled at any collector's office.

F 17.

Return of all the steam-engines in use in the district of Buffalo creek, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or factory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Jamestown	Iron foundry	Daniel S. Williams	8	Blowing	High	1834	Culver & Dickson	4 years	
Dunkirk	Iron foundry	S. W. Dickson	6	Blowing	Do.	1832	Cock, Thomas, & Co.	6 years	
Olean	Saw mill	Bacon & Targee	15	Sawing lumber	Do.	1836	S. Wilkeson & Sons	2 years	Rotary; burst boilers first year.
Hinsdale	Saw mill	—— Moore	25	Sawing lumber	Do.	1836	S. Wilkeson & Sons	2 years	Rotary.
Attica, Genesee co	Stone mill	Charles Smith	10	Sawing stone	Do.	1836	S. Wilkeson & Sons	2 years	Rotary.
Aurora, Erie co.	Tannery	T. Patchin	18	Grinding bark	Do.	1833	Gibson, Grayson, & Co.	5 years	
Buffalo	Eagle foundry	G. W. Skinner	8	Blowing furnace	Do.	1836	S. Wilkeson & Sons	2 years	
Do.	Machine shop	Cummings & Clark	8	Turning and finishing	Do.	1837	Cummings & Clark	1 year	
Do.	Steam foundry	S. Wilkeson & Sons	8	Blowing furnace	Do.	1830	S. Wilkeson & Sons	8 years	
Do.	Buffalo tannery	George Palmer	18	Grinding bark	Do.	1832	Gibson, Grayson, & Co.	6 years	
Do.	Tannery	Rumsey & Howard	18	Grinding bark	Do.	1833	Gibson, Grayson, & Co.	5 years	
Do.	Sash factory	D. Bowen	5	Sawing, &c.	Do.	1832	Hebard & Fairchild	6 years	
White Haven, Grand Isle.	Saw mill	East Boston timber co.	80	Sawing lumber	Do.	1835	Gibson, Grayson, & Co.	3 years	

COLLECTOR'S OFFICE, *Cape Vincent, November 2, 1838.*

SIR: In compliance with your circular instructions of the 12th of July, requiring information in regard to the subjects embraced in a resolution of the House of Representatives of the 29th of June last, accompanying the same, I transmit, herewith, in the form presented by the Department, a statement of all the steam-engines employed in this district, with the purposes to which they are applied.

As no "steamboats" are owned, or accidents have happened in the use of steam-engines, in this district, I am unable to furnish the information required under the 2d, 3d, 4th, 5th, 6th, and 7th "branches of the resolution" therein referred to; and the limited knowledge I possess of their construction renders me unable to give any useful information in regard to the 9th.

I am, very respectfully, your obedient servant,

JERE. CARRIER, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Secretary.*

F 19.

***Return** of all the steam-engines in use in the district of Cape Vincent, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.*

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Cape Vincent	Steam grist mill -	T. Perignet -	12-horse -	Grinding grain -	High pres.	1835	H. Alexander -	3 years.
French Creek	Steam saw mill -	George Weeks -	20-horse -	Sawing lumber -	-	1836	W. Avery -	2 years.

REMARKS.—There are two other small engines: one applied to a manufactory of leather, and the other to a turning-lathe in a blacksmith's shop; each of 4-horse power. No steamboats or locomotives belong to the district.

F 20.

Return respecting steam-engines used in steamboats in the district of Oswego, New York; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
Oswego - -	Lake Ontario -	287 tons.	143 feet.	20 ft. 5 in.	7 ft. 8 in.	Oswego -	1834	Young.
Oneida - -	Lake Ontario -	227	132	19 2	9 0	Oswego -	1835	G. S. Weeks.

F 20—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
G. W. Bruen, H. Fitzhugh.	John Evans - -	J. Vandewater - -	80	Low -	Wm. Avery -	1834	About 18 months.
H. Fitzhugh, W. Buckley, G. N. Seymour, E. B. Allen, A. Smith	A. Smith - -	D. Wait, C. Johnson -	60	Low -	Wm. Avery -	1834.	About 30 months.

Return of all the steam-engines in use in the district of Oswego, New York, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Oswego -	Abraham Varick - -	15	Marine railway -	High -	1836	Walcott & Co. -	About 12 months.
Oswego -	E. Knower, T. W. Olcott, A. Bronson, J. N. Bonestreet, &c.	12	Dredging machine	High -	1836	Walcott & Co., of Auburn.	About 12 months.

NOTE.—The dredging machine is used to remove earth and stones from a part of the harbor.

Return respecting steam-engines used in steamboats in the district of Oswegatchie; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
United States -	On St. Lawrence river and lake Ontario.	386 28	143 ft. 2in.	26 ft. 7 in.	11 ft. 0 in.	Oswegatchie -	1832	William Capes.
Black Hawk - -	St. Lawrence river -	126 31	106 0	18 0	7 0	French creek -	1833	G. S Wicks.
Rossie - -	Black lake - -	45 88	68 3	13 2	5 6	Morristown -	1837	Edward Beaupré.
Paul Pry - -	On ferry across St. Lawrence river.	47 57	75 0	12 4	5 5	Heuvelton, in Oswegatchie -	1832	Paul Boyington.

F 21—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
Ontario and St. Lawrence steamboat co.	James Van Cleve -	John J. Taylor - -	120	Low -	W. Avery & Co.	1832	6 years.
William Bacon & Anastatius Ford.	Wm. T. Barnes -	Wm. T. Barnes - -	30	Low -	W. Avery & Co.	1833	5 years.
White & Hooker -	T. L. Benedict -	T. L. Benedict - -	12	High -	Starbuck & Son	1831	3 years.
Geo. W. Shepard -	David Wells -	David Wells - -	12	High -	Starbuck & Son	1832	6 years.

DISTRICT OF OSWEGATCHIE, *November* 12, 1838.

SMITH STILWELL, *Collector.*

F 22.

Return of all the steam-engines in use in the district of Oswegatchie, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Rossie -	Rossie, Galena co.	Rossie Galena co.	12	Raising mineral, and pumping water.	High -	1830	Starbuck & Son -	8 years.
Oswegatchie -	Ogdensburg steam foundry and machine shop.	E. B. Allen, and Allen Chaney.	8	Propelling furnace-bellows, iron & wood lathe, saw, &c.	High -	1837	Ozial Davis -	1 year.

DISTRICT OF OSWEGATCHIE, *November* 12, 1838.

SMITH STILWELL, *Collector.*

F 23.

Return of all the steam-engines in use in the district of Niagara, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manuf'ry.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pres.	When constru'd.	By whom constructed.	How long in use.	Remarks.
Lockport, Niagara co.	Machine shop	George Mann -	8	Turning -	High	1825	-	12 years	No explosion has ever occurred.
Lewiston, do. -	Grist mill -	Assignees of Obed Smith.	12	Grist mill	High	1835	Gibson Grayson & Co.	3 years	Do. do. - do.

COLLECTOR'S OFFICE, *District of Niagara, October* 1, 1838.

SEYMOUR SCOVELL, *Collector*

Return of steam-engines used on railroads in the district of Niagara; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Reps. of June 29, 1838.

Name of railroad.	Names of locomotives.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Lockport and Niagara Falls Railroad.	Clinton -	20	High -	1838	Rogers, Ketchum, and Grosvenor, Paterson, N. J.	Since June 1, 1838.	No explosions have ever taken place, or loss of life.
Do. do. do.	Downing -	15	High -	1837	Browning, Dunham, & Co., New York.	Since July 1, 1837.	Do. do. do.

COLLECTOR'S OFFICE, *District of Niagara, October* 1, 1838.

SEYMOUR SCOVELL, *Collector.*

F 25.

Return of all the steam-engines in use in the district of Sackett's Harbor, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Sackett's Harbor.	Distillery -	Baker & Gouthrie	18 horse -	Distillery and mill	High -	1834	William Avery -	4 years.

COLLECTOR'S OFFICE, *Sackett's Harbor, October* 1, 1838.

D. N. BARNEY, *Collector.*

Return respecting steam-engines used in steamboats in the district of Sackett's Harbor; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 23, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine was constructed.	When engine was constructed.	How long in use.
			Ft. in.	*Ft. in.*	*Ft. in.*											*Mos.*
Ontario	Sackett's Harbor.	232	112	28	8 3	S. Harbor	1816	C. Case	E. Camp & Co.	P. Sexton	A. Runsey	28	Low	S. Sexton	1816	14
Sophia		50	67 8	18 2	4 7	Do.	1817	A. S. Robberts	Do.	F. Rhode	A. Ranney	28	Do.	J. P. Allaire	1817	19
Martha Ogden		49	74 3	17 10	4 2	Do.	1823	Do.	L. Ogden & Co.	D. Reed	A. Walker	22	Do.	Do.	1817	12
Brownville		84	84	20 1	10 2	Brownville	1830	Do.	G. Turner & Co.	B. Dood	J. Dood	22	Do.	Lawrence	1831	18
Brownville		114	85 10	20	7 4	Do.	1831	C. Case	D. Griffin & Co.	W. Vaughn	Do.	30	Do.	Do.	1831	5
Charles Carroll		70	81 8	14 6	6 3	S. Harbor	1831	Do.	Do.	C. Case	Do.	28	Do.	J. Dood	1831	5
Wm. Avery		191	131	21	7 4	Do.	1833	Do.	Do.	W. Johnson	P. Baker	38	Do.	W. Avery	1833	14
Telegraph		197	131	18 9	8 4	Dexter	1837	A. Sprague	W. Buckley & Co.	R. F. Childs	O. Perry	35	Do.	A. Hart	1837	1

COLLECTOR'S OFFICE, *Sackett's Harbor, October* 1, 1838.

D. N. BARNEY, *Collector.*

Return of steam-engines used on railroads in the district of Genesee; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Tonawanda railroad -	No. 1 -	30	High	1836	M. W. Baldwin -	1 year 9 months	No accidents have ever happened.
	No. 2 -	30	Do.	1836	Do. -	1 " 9 "	Do. do. do.

Return of all the steam-engines in use in the district of Genesee, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Rochester -	Genesee furnace -	Wm. H. Cheeny	12	Blowing furnace -	High	1833	John C. Langdon	2 yrs.	No accidents ever happened.
Do. -	Rochester city furnace	Bush & Velie -	6	Do. -	Do.	1838	Israel Angell -	2 mos.	Do. do.
Do. -	Flouring mill -	Hervey Ely -	75	Pumping water -	Do.	1836	A. Walcott & Co.	6 mos.	Do. do.

N. B.—There are five steamboats which touch at this port weekly, four of which are American vessels; a description of which you will undoubtedly receive from the districts from which they hail or are owned. The other is a British steamer, which touches here twice in each week; is 370 tons burden, and is an excellent vessel; but, as the resolution of Congress did not embrace foreign vessels, I did not deem it necessary to give a full description of her.

JACOB GOULD, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

F 28.

NEW YORK, *December* 10, 1838.

SIR: The undernamed ferry-boats, contained in the table that I recently furnished you, are all that I can obtain the tonnage of. The owners and managers of steam ferry-boats have been very reluctant in complying with the late law; hence the cause that the measurer has not been able to come at them. I think, however, it may be completed in three or four days.

		Tons.	95ths.
Fulton ferry to Brooklyn, Long Island	Relief	145	30
	Olive Branch	159	6
	Fulton	184	87
	Wm. Cutting	85	67
Catharine-street ferry to Brooklyn, L. Island	Independence	124	10
	Manhattan	90	58
	Constitution	88	60
South ferry to Brooklyn, Long Island	New York	304	74
	Brooklyn	304	74
	Jamaica	173	84
Grand-street ferry to Williamsburg, L. Island	Noah Waterbury	89	34
	Henry Remsen	72	83
	Daniel Jackson	98	24
Hurl-gate ferry to Hallett's cove, L. Island	Experiment	66	76
	Pluto	69	18
Newburg to Fishkill	Gold Hunter	113	42

I am, very respectfully, yours,

ELIHU S. BUNKER.

J. HOYT, Esq., *Collector, New York.*

NEW JERSEY.

G 1.

DISTRICT OF PERTH AMBOY,
Collector's Office, October 20, 1838.

SIR: I herewith transmit an account of steam-engines used in this district, agreeable to circular dated 12th July last.

I am, very respectfully, your obedient servant,

D. K. SCHENCK,
Collector, Perth Amboy.

Hon. LEVI WOODBURY,
Secretary of the Treasury U. S.

G 2.

Return respecting steam-engines used in steamboats in the district of Perth Amboy; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	Names of owners.
Independence -	Amboy and New York	368 49	150 ft. 3in.	26 ft. 0 in.	10 ft. 0 in.	New York -	1827	Camden & Amboy R. R.
Swan - -	Do. do. -	353 20	169 9	24 0	9 0	New York -	1826	Do. do.
Trenton - -	Do. do. -	328 45	187 6	22 8	7 11	Hoboken, N. J.	1825	Do. do.
Thistle - -	Do. do. -	202 52	123 5	23 2	7 11	New York -	1824	Do. do.
New York - -	Do. do. -	247 11	128 6	23 5	8 8	Philadelphia -	1827	Do. do.
Napoleon - -	N. Y. & N. Brunswick	169 39	131 6	20 6	6 7	New York -	1830	N. Brunswick Canal Co.
Convoy - -	Amboy & N. Brunswick	91 28	90 6	16 4	6 7	Philadelphia -	1826	Lehigh Coal & N. Co.
Monmouth - -	New York and Middletown point.	184 3	124 6	18 6	8 7	Baltimore -	1836	Steamboat Co. Middletown point.

G 2—Continued.

Names of masters or commanders.	Names of engineers.	By whom built.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
A. H. Schultz -	Wm. Andrews -	Brown & Bell - -	125	Low -	W. Point foundry	1833	5 years.
Wm. M. Jenkins -	Wm. Franklin -	J. P. Allaire - -	70	Low -	James P. Allaire -	1827	
Wm. M. Jenkins -	P. Bloomsburgh -	R. L. Stevens - -	80	Low -	R. L. Stevens -	1825	
Charles Fish - -	—— Duke - -	- - - -	50	Low -	J. P. Allaire -	1824	
E. Richards - -	Daniel Martin -	John Vaughn - -	65	Low -	Rush & Muhlenberg	1827	11 years.
Isaac Fisher - -	Henry D. Hunt -	Lawrence & Sneeden -	30	Low -	James P. Allaire -	1830	8 years.
John L. Griffiths -	Edwin Mason -	- - - -	24	High.			
F. P. Simpson -	- - -	Rogers, Brown, & Culley	-	Low.			

NOTE.—Locomotives the same as those returned by the collector at Burlington.

G 2—Continued.

Return of all the steam-engines in use in the district of Perth Amboy, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pres.	When const'ed.	By whom constructed.	How long in use.
Perth Amboy, N.J.	Lock factory	Solomon Andrews	3 to 5	Making locks, tur'g lathes, &c.	High	1835	Unknown	3 months.
New Brunswick	India-rubber factory	Hutchings & Onderdonk.	6	Grinding rubber, &c.	High	1834	Unknown	4 years.
Do.	Grist and bark mill	J. S. Letson	9	Grinding, &c.	High	1832	Paul Sabatin	6 years.
Do.	N. Brunswick foundry	H. Fish	4	Casting, &c.	High	1835	H. Fish	3 years.
Do.	Turning factory	Andrew Agnew	2	Turning	High	1838	A. Agnew	6 months.
Elizabethtown	Malleable iron works	T. R. Wood & Co.	24	Foundry	High	1836	P. Hadden	2 years.
Do.	N. J. hemp and flax co.	Incorporated co.	35	Manufacturing rope, &c.	High	1838	—— Burbeck	2 months.
Do.	Oil-cloth manufactory	—— Edwards	3	Grinding paint, &c.	Low	1835	—— James	3 years.
Cross-roads	Woodward's saw-mill	S. S. Woodward	6	Sawing timber	High	Unk'n	Wm. T. James	Unknown.

DISTRICT OF PERTH AMBOY, *Collector's Office, October* 18, 1838. D. K. SCHENCK, *Collector.*

G 3.

COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

SIR: In answer to your circular of the 12th July, annexing a resolution of the House of Representatives of June 29, 1838, I enclose, herewith, returns Nos. 1, 2, 3, which embrace all the steam-engines that I can discover as being in use in this district.

In answer to the second, third, fourth, fifth, sixth, and seventh branches of the resolution, I have the pleasure of reporting that there has never, so far as I can discover, or ever have known, any loss of life or property occurred by the explosion of the same. Those on board of the steamboats, and also those employed on the railroad, are all under the immediate inspection of Messrs. Edwin A. and Robert L. Stevens, who constantly keep them in repair. They are all made on the low-pressure principle, which adds much to their safety.

I am sorry that my sickness, added to the absence of the persons to whom I had to apply for information, has prevented me from making this report sooner. I have the honor to be, sir, very respectfully, your obedient servant,

Hon. LEVI WOODBURY, *Secretary of the Treasury, Washington City.* GERSHOM MOTT, *Collector.*

Return respecting steam-engines used in steamboats in the district of Burlington, in the State of New Jersey; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine was constructed.	When engine was constructed.	How long in use.
			Ft.	*Ft.*	*Ft.*											*Y.*
New Philada.	River Del.,	322	188	23½	7½	Philada. -	1826en	larged 1837	Camden and	D. S. Craven	R. Allen -	95	Low	R. L. Stevens	1826	12
Philadelphia -	betw'n Phil.	265	135	23½	9	Do. -	1828		Amb. R. R. and Trans. Co.	James Cox -	C. Green -	50	Do.	Rush & Muhlenberg.	1828	10
Burlington -	& Trenton.	230	133	23½	8	Hoboken -	1827	–	–	David Martin	S. Houghtailing.	45	Do.	R. L. Stevens	1827	11
States' Rights	River Del.	119	90	21	7	New York -	1835	–	–	J. C. Morgan	N. Davis	25	Do.	Do. -	1835	3
John Fitch -	bet. Philad. & Camden.	136	103	20	7	Crosswick's cr'k, N. J.	1837	R. & S. R. Jaques.	E.A.&R.L. Stevens.	R. C. Buzby	B. Jobs -	25	Do.	Do. -	1837	1

These boats formerly all belonged to the Messrs. Stevens, who always superintend the building of their boats. The first four vessels not having been first enrolled here, I cannot ascertain the ship-carpenter by whom they were constructed.

COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

GERSHOM MOTT, *Collector.*

G 2—Continued.

Return of all the steam-engines in use in the district of Perth Amboy, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pres.	When const'ed.	By whom con-structed.	How long in use.
Perth Amboy, N.J.	Lock factory -	Solomon Andrews	3 to 5	Making locks, tur'g lathes, &c.	High	1835	Unknown -	3 months.
New Brunswick -	India-rubber factory -	Hutchings & Onderdonk.	6	Grinding rubber, &c. -	High	1834	Unknown -	4 years.
Do. - -	Grist and bark mill -	J. S. Letson -	9	Grinding, &c. - -	High	1832	Paul Sabatin -	6 years.
Do. - -	N. Brunswick foundry	H. Fish -	4	Casting, &c. - -	High	1835	H. Fish -	3 years.
Do. - -	Turning factory -	Andrew Agnew -	2	Turning - - -	High	1838	A. Agnew -	6 months.
Elizabethtown -	Malleable iron works -	T. R. Wood & Co.	24	Foundry - - -	High	1836	P. Hadden -	2 years.
Do. - -	N. J. hemp and flax co.	Incorporated co. -	35	Manufacturing rope, &c. -	High	1838	—— Burbeck -	2 months.
Do. - -	Oil-cloth manufactory -	—— Edwards -	3	Grinding paint, &c. -	Low	1835	—— James -	3 years.
Cross-roads -	Woodward's saw-mill -	S. S. Woodward -	6	Sawing timber - -	High	Unk'n	Wm. T. James -	Unknown.

DISTRICT OF PERTH AMBOY, *Collector's Office, October* 18, 1838. D. K. SCHENCK, *Collector.*

G 3.

COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

SIR: In answer to your circular of the 12th July, annexing a resolution of the House of Representatives of June 29, 1838, I enclose, herewith, returns Nos. 1, 2, 3, which embrace all the steam-engines that I can discover as being in use in this district.

In answer to the second, third, fourth, fifth, sixth, and seventh branches of the resolution, I have the pleasure of reporting that there has never, so far as I can discover, or ever have known, any loss of life or property occurred by the explosion of the same. Those on board of the steamboats, and also those employed on the railroad, are all under the immediate inspection of Messrs. Edwin A. and Robert L. Stevens, who constantly keep them in repair. They are all made on the low-pressure principle, which adds much to their safety.

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Hon. LEVI WOODBURY, *Secretary of the Treasury, Washington City.* GERSHOM MOTT, *Collector.*

Return respecting steam-engines used in steamboats in the district of Burlington, in the State of New Jersey; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine was constructed.	When engine was constructed.	How long in use.
			Ft.	*Ft.*	*Ft.*											*Y.*
New Philada.	River Del.,	322	188	23½	7½	Philada. -	1826	enlarged 1837	Camden and	D. S. Craven	R. Allen -	95	Low	R. L. Stevens	1826	12
Philadelphia -	betw'n Phil.	265	135	23½	9	Do. -	1828		Amb. R. R. and Trans. Co.	James Cox -	C. Green -	50	Do.	Rush & Muhlenberg.	1828	10
Burlington -	& Trenton.	230	133	23½	8	Hoboken -	1827	–	–	David Martin	S. Houghtailing.	45	Do.	R. L. Stevens	1827	11
States' Rights	River Del.	119	90	21	7	New York -	1835	–	–	J. C. Morgan	N. Davis	25	Do.	Do. -	1835	3
John Fitch -	bet. Philad. & Camden.	136	103	20	7	Crosswick's cr'k, N. J.	1837	R. & S. R. Jaques.	E.A.&R.L. Stevens.	R. C. Buzby	B. Jobs -	25	Do.	Do. -	1837	1

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COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

GERSHOM MOTT, *Collector.*

G 2—Continued.

Return of all the steam-engines in use in the district of Perth Amboy, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pres.	When const'ed.	By whom constructed.	How long in use.
Perth Amboy, N.J.	Lock factory -	Solomon Andrews	3 to 5	Making locks, tur'g lathes, &c.	High	1835	Unknown -	3 months.
New Brunswick -	India-rubber factory -	Hutchings & Onderdonk.	6	Grinding rubber, &c. -	High	1834	Unknown -	4 years.
Do. - -	Grist and bark mill -	J. S. Letson -	9	Grinding, &c. - -	High	1832	Paul Sabatin -	6 years.
Do. - -	N. Brunswick foundry	H. Fish -	4	Casting, &c. - -	High	1835	H. Fish -	3 years.
Do. - -	Turning factory -	Andrew Agnew -	2	Turning - - -	High	1838	A. Agnew -	6 months.
Elizabethtown -	Malleable iron works -	T. R. Wood & Co.	24	Foundry - - -	High	1836	P. Hadden -	2 years.
Do. - -	N. J. hemp and flax co.	Incorporated co. -	35	Manufacturing rope, &c. -	High	1838	—— Burbeck -	2 months.
Do. - -	Oil-cloth manufactory -	—— Edwards -	3	Grinding paint, &c. -	Low	1835	—— James -	3 years.
Cross-roads -	Woodward's saw-mill -	S. S. Woodward -	6	Sawing timber - -	High	Unk'n	Wm. T. James -	Unknown.

DISTRICT OF PERTH AMBOY, *Collector's Office, October* 18, 1838. D. K. SCHENCK, *Collector.*

G 3.

COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

SIR: In answer to your circular of the 12th July, annexing a resolution of the House of Representatives of June 29, 1838, I enclose, herewith, returns Nos. 1, 2, 3, which embrace all the steam-engines that I can discover as being in use in this district.

In answer to the second, third, fourth, fifth, sixth, and seventh branches of the resolution, I have the pleasure of reporting that there has never, so far as I can discover, or ever have known, any loss of life or property occurred by the explosion of the same. Those on board of the steamboats, and also those employed on the railroad, are all under the immediate inspection of Messrs. Edwin A. and Robert L. Stevens, who constantly keep them in repair. They are all made on the low-pressure principle, which adds much to their safety.

I am sorry that my sickness, added to the absence of the persons to whom I had to apply for information, has prevented me from making this report sooner. I have the honor to be, sir, very respectfully, your obedient servant,

Hon. LEVI WOODBURY, *Secretary of the Treasury, Washington City.* GERSHOM MOTT, *Collector.*

Return respecting steam-engines used in steamboats in the district of Burlington, in the State of New Jersey; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine was constructed.	When engine was constructed.	How long in use.
			Ft.	*Ft.*	*Ft.*											*Y.*
New Philada.	River Del.,	322	188	23½	7½	Philada. -	1826en	larged 1837	Camden and	D. S. Craven	R. Allen -	95	Low	R. L. Stevens	1826	12
Philadelphia -	betw'n Phil.	265	135	23½	9	Do. -	1828		Amb. R. R. and Trans. Co.	James Cox -	C. Green -	50	Do.	Rush & Muhlenberg.	1828	10
Burlington -	& Trenton.	230	133	23½	8	Hoboken -	1827	–	–	David Martin	S. Houghtailing.	45	Do.	R. L. Stevens	1827	11
States' Rights	River Del.	119	90	21	7	New York -	1835	–	–	J. C. Morgan	N. Davis	25	Do.	Do. -	1835	3
John Fitch -	bet. Philad. & Camden.	136	103	20	7	Crosswick's cr'k, N. J.	1837	R. & S. R. Jaques.	E. A. & R. L. Stevens.	R. C. Buzby	B. Jobs -	25	Do.	Do. -	1837	1

These boats formerly all belonged to the Messrs. Stevens, who always superintend the building of their boats. The first four vessels not having been first enrolled here, I cannot ascertain the ship-carpenter by whom they were constructed.

COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

GERSHOM MOTT, *Collector.*

G 4—Continued.—(No. 2.)

Return of steam-engines used on railroads in the district of Burlington, and State of New Jersey; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Camden and Amboy -	No. 1	22	Low	1832	Swartwout, (Eng.) -	6 years	The Camden and Amboy railroad extending into the district of Perth Amboy, the collector of that district may also return these engines; but, as the principal place of deposite and office for business is in my district, I have returned them as belonging here.
Do. -	" 2	22	Do.	1833	Robert L. Stevens -	5 "	
Do. -	" 3	22	Do.	1833	Do. -	5 "	
Do. -	" 4	22	Do.	1834	Do. -	4 "	
Do. -	" 5	22	Do.	1834	Do. -	4 "	
Do. -	" 6	22	Do.	1834	Do. -	4 "	
Do. -	" 7	22	Do.	1834	Do -	4 "	
Do. -	" 8	22	Do.	1835	Do. -	3 "	
Do. -	" 9	30	Do.	1835	Do. -	3 "	
Do. -	" 10	30	Do.	1835	Do. -	3 "	
Do. -	" 11	22	Do.	1835	Do. -	3 "	
Do. -	" 12	22	Do.	1836	Do. -	2 "	
Do. -	" 13	22	Do.	1836	Do. -	2 "	
Do. -	" 14	22	Do.	1837	Do. -	1 "	
Do. -	" 15	30	Do.	1837	Do. -	1 "	
Do. -	" 16	30	Do.	1837	Do. -	1 "	

COLLECTOR'S OFFICE, *Lamberton, District of Burlington, October* 30, 1838.

GERSHOM MOTT, *Collector.*

Return of all the steam-engines in use in the district of Burlington, and State of New Jersey, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or factory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Bordentown -	Camden and Amboy railroad engine factory.	Camden and Amboy railroad company.	10	Making engine machinery	Low	1836	Robert L. Stevens -	2 years.
Trenton -	Blacksmith shop - -	James Conelly -	5	Blacksmith work -	Low	1836	Not known - -	2 years.
Burlington -	Burlington steam mill -	Gaskell, Buckman, & Co.	25	Grinding grain and sawing timber.	High	1838	Parish & Johnson, Philadelphia.	1 m'th.
N. Jersey State prison.	New Jersey State prison -	State of New Jersey -	4	Cooking for prisoners -	Low	1836	Morris & Co., Philadelphia	2 years.

COLLECTOR'S OFFICE,
Lamberton, District of Burlington, October 30, 1838.

GERSHOM MOTT, *Collector.*

G 6.

COLLECTOR'S OFFICE,
Great Egg Harbor, October 6, 1838.

SIR: In answer to the circular from the Department of the 1st instant, I would state, that if I could have given any information respecting steamboats, it should have been furnished as soon as required. There are no boats of the kind owned or used in the district, and I have no practical knowledge of them that would be of use to the Department. All I know of them is, that the boats on the Western waters are in all respects, and especially in the machinery and management, far inferior to those of the East.

I have the honor to be, sir, most respectfully, yours,

M. D. CANFIELD.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

G 7.

COLLECTOR'S OFFICE,
Tuckerton, N. J., October 6, 1838.

SIR: Your supplemental circular of the 1st instant is received. In answer to which, I have to state that a formal return, in blank, was made to yours of 12th July last.

I have only to state at this time, as before, that there are no steamboats belonging or plying in any waters in this district, nor ever have; nor railroads or engines laid or used in the district in any way whatever; nor has any accident or loss of lives or property occurred. I further add, that I have no knowledge or experience upon the subject of steam-engines.

Very respectfully, your obedient servant,

GEO. W. TUCKER.

Hon. LEVI WOODBURY,
Secretary of the Treasury U. S.

Return respecting steam-engines used in steamboats in the district of Camden, New Jersey; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Delaware, - - -	These ten boats are ferry-boats plying between Philadelphia and Camden; and the first six are licensed at this office.
Camden, - - -	
Philadelphia, - - -	
William Wray, - -	
Southwark, - - -	
Kaighn's Point, - -	
Kensington, - - -	
Citizen, - - -	
States' Rights, - -	
John Fitch, - - -	
New Jersey, - - -	Ferry-boats, plying between Gloucester point, in New Jersey, and Greenwich point, in Pennsylvania, three miles below Philadelphia.
Robert Wharton, - -	
Pioneer, - - -	Running between Salem, New Jersey, and Philadelphia.
Clifton, - - -	

All the above are partly owned and used in this district; and the information respecting them, required under the above-mentioned resolution, is presumed to have been duly returned by the collector of Philadelphia.

Whortleberry, - -	This steamboat is a ferry-boat plying between Port Penn, in New Jersey, and Wilmington, in the State of Delaware, and is believed to be owned and licensed there.

The above are all the steamboats owned and in part or whole plying within this district.

G 8—Continued.

Return of steam-engines used on railroads in the district of Camden, New Jersey; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Camden and Woodbury	Fire Fly -	12	High -	1833	C. Tayleur & Co. -	5 years	There are a number of locomotive-engines used on the Camden and Amboy railroad, which is partly in this district; the required returns respecting which, it is understood, have been made by the collector of Burlington district.
	Red Rover -	12	High -	1833	C. Tayleur & Co. -	5 years	

Return of all the steam-engines in use in the district of Camden, New Jersey, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Camden -	Carman's steam mill	William Carman -	30	Sawing timber	High -	1835	Rush & Muhlenberg -	3 years.
Camden -	–	John Flanagin -	16	Sawing timber	High -	1837	Rush & Muhlenberg -	1 year.

MORRIS CROXALL, *Surveyor, &c.*

[The collector at Bridgetown made blank —.

G 9.

COLLECTOR'S OFFICE,

Newark, November 23, 1838.

I have received this day the accompanying letter from Seth Boy
q., one of the ablest practical and theoretical engineers in this sec-
The information it contains is the result of a series of experiments
ith a machine which he has constructed for the purpose. It was
ived soon enough to enclose with my return respecting steam-en-
ent by the last mail;) but, as it imbodies much that is of impor-
hope it may be in time to be appended to the return.
e the honor to be, sir, very respectfully, your obedient servant,

A. GIFFORD, *Collector.*

LEVI WOODBURY,
Secretary of the Treasury.

G 10.

NEWARK, (N. J.) *November* 22, 1838.

SIR: Much information concerning the explosion of steam-boilers
ntly been laid before the public; yet there is one important fact,
as produced much mischief, that I have not seen noticed.
act that water that has lain still in a boiler for some time, under
re of steam, and exposed to the action of the fire, on being stirred
r gives up a quantity of steam, and much increases the pressure
iler; and that this increase of pressure is nearly in a ratio with
ure that existed at the time the water was agitated, and the vio-
the agitation; or if the engine is at work, or the steam passing
by any means the agitation is much increased, the effect is par-
ilar, is of importance, and should be known by all having charge
-boilers.
plain the operation: suppose a boat lying at the wharf with the
till, and safety-valve closed, but the fire burning as usual; the
nains still, but becomes hotter, and the pressure in the boiler slowly
. When the engine is started, a part of the steam is let out of the
hich is replaced by more at the bottom, or hottest part of the water;
o the surface, and, assisted by the jar or motion of the engine,
an agitation in the water that suddenly disengages a quantity of
d increases the pressure in the boiler, and, if beyond its strength,
sion follows, as has frequently happened when boats are about
the wharf.
ve, beyond a doubt, the effect of agitation, is only to refer to the
of boilers on board of boats that have more than one boiler, as
f the *Moselle*, at Cincinnati, where four boilers burst nearly at
instant.
one boiler explodes, the severe agitation produced by it instantly
the heated water in the other boilers into steam, increasing the

pressure far beyond their strength. If the pressure had not been increased instantaneously, they would not all burst simultaneously. No person can believe that four boilers were ever made so near the same strength, that a slow increasing pressure, made by ordinary means, would burst them at one and the same time.

The only safety we can have is, to keep so far within the strength of a boiler as to leave room for such sudden increase of pressure, or allow the steam to pass off by the safety-valve when the engine is stopped; or perhaps a resort to both is preferable to the present state of engineering.

Respectfully,

SETH BOYDEN.

A. GIFFORD, Esq., *Collector, Newark.*

G 11.

COLLECTOR'S OFFICE,

Newark, November 21, 1838.

SIR: I have the honor to transmit my return respecting steam-engines, &c. in the district of Newark, which has been obtained partly through letters, and partly by personal attendance of our inspector, J. J. Plume, Esq. If I should receive any further information, it shall be forwarded in a supplemental return before the 1st of December next.

I have the honor to be, sir, very respectfully, your obedient servant,

A. GIFFORD, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Newark, (New Jersey:) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			Feet.	ft. in.	ft. in.											
Passaic	Newark to New York.	291 55	160	21 9	8 8	Williamsburg, N.Y.	1836	Capen & Burtis.	Robert L. Stevens.	Rich'd Ross	D. Hutchinson.	90	Low	Philip Kipp	1836	1½ year.
Forerunner.	On Hackensack river, towing canal boats.	6 41	46	4 0	3 6	Waterford, N. Y.	Unknown.	Unknown	Morris Canal Company.	R. B. Edwards.	N. Few -	6	High	Unknown; was built at Gibbonsville.	Unkn'n. —	6 mos. as a tow-b't for canal company.

PENNSYLVANIA.

H 1.

COLLECTOR'S OFFICE,
Philadelphia. October 17. 1838.

SIR: I herewith transmit return of steamboats whose managing owners reside in this district: also, a return embracing all the steamboats employed on the Delaware and Schuylkill rivers, owned in this district, and the adjoining districts of New Jersey and Delaware: of the latter, there appears to be but one, viz: the "Wilmington."

In the course of ten days I hope to be able to furnish additional returns of locomotives and steam-engines employed in manufactories, which, with those already furnished, will complete the returns required by your circular of July 12th last.

I have the honor to be, with great respect, your obedient servant,

JOHN KERN,
Deputy Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Philadelphia.

Name of boat.	Where employed.	Tons & 95ths.	Length.	Breadth.	Depth.	Where built.	When built.	By whom built.	Names of owners.
			Ft. in.	Ft. in.	Ft. in.				
William Wray -	*Market-street ferry to Camden.	80	–	–	–	Kensington, Philad'a	1829	Wm. Pennington -	Reeves & Nivel.
Philadelphia -	* Do do	80	–	–	–	Do do	1828	Do -	Do
Delaware -	* Do do	75	–	–	–	Do do	1829	Do -	R. Cooper & others.
Camden -	* Do do	70	–	–	–	Do do	1829	Do -	Paul & Burr.
Citizen -	Arch-street ferry to Camden.	86 40	76 1	20 4	6 3	Do do	1829	Do -	Champion, Correll, and Browning.
Kensington -	Browning's ferry to Camden.	54 54	70 0	17 4	5 0	Do do	1830	John Vaughn -	Do do
Southwark -	*South-street ferry to Camden.	60 94	69 1	18 5	5 4	Do do	1829	Wm. Pennington -	Champion & Toole.
Kaighn's Point -	* Do. do	79 25	73 8	19 3	6 3	Do do	1832	John Vaughn -	Do do
State Rights -	*Walnut-street ferry to Camden.	119 54	90 0	21 3	6 9	New York - -	1833	E. Peck -	Captain Mickle & others.
John Fitch -	* Do do	137 71	105 0	20 8	6 8	Crosswick creek, near Burlington, N. J.	1837	R. Jacques -	Do do
Linnæus -	Philadel'a to Cape May	92 37	94 0	16 0	6 6	New York - -	1824	Captain Peck -	M. C. Ralston.
Flushing -	*Philadelphia to Salem	107 53	98 0	17 4	6 8	Flushing, Long Island	1832	Elijah Peck -	J. T. Boone & others.
Pennsylvania -	As a tow-boat to Bristol	202 11	120 3	22 0	8 0	Philadelphia -	1818	Carter & Van Dusen	Lehigh Coal Company.
Philadelphia -	As a tow-boat to Bordentown.	250 37	134 0	23 8	8 3	Do -	1827	J. Grice -	R. & E. Stevens.
Telegraph -	Philad'a & Wilming'n	330 21	169 9	22 6	8 9	Do -	1836	J. Vaughn -	Wilmon Whelden, jr.
Chieftain -	Philad'a and Bristol -	101 26	79 0	21 0	6 9	Do -	1838	Jacob Teese -	Thomas Halloway.
Car of Commerce	Not employed at present	127 6	89 0	20 1	7 8	Do -	1836	Van Dusen & Byerly	Reily & Van Amringe.
Ohio -	Philad'a to Newcastle	391 30	175 0	25 9	9 0	Do -	1832	Teese & Van Hook	Davidson & others, U. line.
Robert Morris -	Philad'a to Bordentown	279 82	137 0	24 0	9 0	Do -	1830	John Vaughn -	Do do
Salem -	As a tow-boat on the Schuylkill.	121 85	95 0	21 75	6 5	Baltimore - -	1830	- -	Do do

H 2--Continued.

Name of boat	Name of captain.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine constructed.	How long engine in use.	How long the boilers in use.
							Since	
Wm. Wray	Frederick Roth	Thomas Hinkemon	30	Low	Thomas Halloway	1829	1829	Since 1835.
Philadelphia	Samuel Dougherty	Benjamin Brown	30	Low	Do do	1828	1828	About one year.
Delaware	William Down	William Irvings	25	Low	Do do	1829	1829	About one year.*
Camden	John Beagary	Jacob Bender	25	Low	Do do	1829	1829	Since 1829.
Citizen	William Richards	William Richards	25	Low	Do do	1829	1829	Since 1837.†
Kensington	George Stockham	G. Stockham	15	Low	Do do	1830	1830	Since 1830
Southwark	J. Stone	J. Stone	15	Low	Do do	1829	1829	Since 1829.
Knight's Point	B. Sutton	B. Sutton	20	Low	Do do	1832	1832	Since 1832.
State Rights	C. Morgan	N. E. Davis	65	Low	R. L. Stevens & others	1833	1833	Since 1833
John Fitch	George English	George Wade	65	Low	Do do	1837	1837	Since 1837
Juniata	William Reeves	J. Evans	35	Low	J. P. Allaire	1824	1824	About one year.
Flushing	G. T. Boon	William Platt	22	Low	Do	1832	1832	About one year.
Pennsylvania	L. Devoe	L. Devoe	40	Low	Rush & Muhlenberg	1818	1818	About two years.
Philadelphia	James Cox	C. Green	60	Low	Do do	1827	1827	About five years.
Telegraph	W. Whelden, jr.	George Thorn	120	Low	T. Halloway	1836	1836	About two years.
Chieftain	J. Felton	-- Middleton	50	Low	Do	1838	1838	Since 1838.‡
Car of Commerce	No captain	No engineer	2 of 35	High	Jacob Green	1836	1836	Since 1836.§
Ohio, (1)	Lewis Davis	J. Johnson	165	Low; two condensing eng's.	Rush & Muhlenberg	1832	1832	Two boilers, 1832.
Robert Morris, (2)	M. Douglass	B. Keich	150	Low; one condensing eng'e.	Thomas Halloway	1830	1830	Two boilers, 1830.
Salem, (3)	William Trout	William Trout	31	Low	Watchman & Brandt	1830	1830	Since 1835.

* The boiler burst on the Jersey side 18 months since. One man lost his life.

† Rebuilt in 1837.

‡ Since sold to Norfolk.

§ Intended to run through the canal to Baltimore, but was too large. Sunk at the wharf during the winter of 1837. Has since been raised.

Name of boat.	Where employed.	Tons & 95ths.	Length.	Breadth.	Depth.	Where built.	When built.	By whom built.	Names of owners.
			Ft. in.	Ft. in.	Ft. in.				
Charleston -	Philad'a to Charleston	569 50	201 4	24 1	12 0	Philadelphia -	1836	J. Vaughn & Son -	Wilson & others.
Wilmington, of Del.	*Philad'a to Wilming'n	278 41	156 0	22 6	8 3	Do -	1829	Samuel Grice -	Wm. W. Young & others.
Delaware -	Towing vessels on the Delaware.	301 52	151 8	21 0	9 8	Do -	1836	J. Vaughn & Son -	Philadelphia steam tow-boat company.
Pennsylvania -	Do do	299 36	150 8	21 0	9 8	Do -	1835	Do do -	Do do
New Philad'a, (4)	Philad'a to Bordentown	265 3	130 4	23 4	8 9	Do -	1825	Do do -	Camden & Amboy rail-road company.
Burlington, (5) -	* Do do	-	-	-	-	Hoboken, N. J. -	1826	- -	Do do
City ice-boat -	Breaking ice in the Delaware.	526 50	174 2	26 3	12 0	Philadelphia -	1837	Do do -	Corporation of the city of Philadelphia.
Pioneer, (6) -	*Philadelphia to Salem	211 8	141 8	18 5	8 0	Do -	1835	Do do -	Salem, Delaware, & Phil-delphia steamboat co.
Experiment -	Tow-boat from Bristol to Philadelphia.	60 00	84 0	14 5	5 3	New York -	1831	- -	James Defoe.
Schuylkill, A -	As a tow-boat on the Schuylkill.	38 15	89 0	11 0	4 0	On Schuylkill -	1835	James Wilson -	Delaware coal company & Schuylkill tow-boat co.
Schuylkill, B -	Do do	48 75	61 0	16 0	5 6	Burlington -	1837	James Eyres	Do do
Rhinoceros -	Dredging along the Del-aware.	30 00	-	-	-	Philadelphia -	1833	William Pennington	R. Walker.
Wasp -	*Bristol to Burlington -	26 12	45 0	14 0	5 0	Do -	1832	Charles Thompson -	J. Bessoneth & others.
Hudson -	*Tow-boat, Bristol, Phil-ad'a, and Schuylkill.	148 22	108 0	23 0	6 5	New York -	1825	- -	Buckman & others.
Robert Wharton -	Philad'a, Greenwich, and Gloucester points.	83 52	76 1	19 2	6 4	Philadelphia -	1833	William Pennington	R. W. Sykes.
New Jersey -	Do do	85 48	80 0	19 5	6 1	Bordentown -	1836	R. & S. R. Jacques	Do
Clifton -	*Philadelphia to Salem	162 56	137 0	18 0	6 8	New York -	1837	—— Vanderbilt -	G. T. Boon.

The horse-power of the steamboats marked 1, 2, 3, 4, 5, 6, was calculated at this office, as the same could not be furnished by the owners or engineers. (See reports of the inspector, J. H. Fisher.)

The steamboats marked thus * are not enrolled or licensed in this district, but ply on the Delaware river, and come to this city, and may be returned from other districts.

H 2—Continued.

Name of boat.	Name of captain.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine constructed.	How long engine in use.	How long the boilers in use.
							Since	
Charleston	No captain	No engineer	2 of 120	Low	Norris & Co.	1836	1836	Since 1836.*
Wilmington, of Del.	F. Black	A. Whaples	120	Low	T. Halloway	1838	1838	Since 1838.†
Delaware	No captain	William Sheppard	2 of 75	High	Rush and Muhlenberg	1836	1836	Since 1836.
Pennsylvania	William Skellinger	J. Rutherford	2 of 75	High	Daniel Large	1835	1835	Since 1835.
New Philad'a	Robert Allen	David S. Craven	222	Low	R. L. Stevens & others	1825	1825	Since 1833.
Burlington	D. S. Martin	T. Samuels	127	Low	Do do	1826	1826	Since 1834.
City ice-boat	No captain	No engineer	2 of 250	High	M. Baldwin	1837	1 winter	One winter.‡
Pioneer	C. Bidderbach	J. Reed	–	Low	T. Halloway	1835	1836	Since 1836.
Experiment	D. P. Lukens	D. P. Lukens	35	Low	Do	1830	1830	Since 1830.
Schuylkill, A	Jacob Ross	J. M. Reeves	12	High	Parrish & Johnson	1835	1835	Since 1835.¶
Schuylkill, B	J. D. McKean	G. Dougherty	35	High	Do	1837	1837	Since 1838.
Rhinoceros	R. Walker	R. Walker	6	High	Rush & Muhlenberg	1833	1833	Since 1833.
Wasp	William Vansciver	William Vansciver	4	Low	T. Halloway	1832	1832	Since 1832.
Hudson	J. Dean	J. S. Moore	35	Low	McQueen; refitted in 1835	1825	1825	Since 1834.§
Robert Wharton	Samuel Tatem	Andrew Miller	24	Low	T. Halloway	1833	1833	Since 1833.
New Jersey	Samuel Tatem	John Brown	26	Low	Do	1836	1836	Since 1838.
Clifton	G. T. Boon	J. Platt	50	Low	J. P. Allaire	1837	1837	About 7 months.

* Laid up for want of business.
† Refitted during the year, Wilmington, Delaware.
‡ Employed during the winter season.
¶ Vessel overhauled in 1837.
§ A new boiler in 1834.

PHILADELPHIA, *September* 21, 1838.

J. H. FISHER, *Inspector.*

tions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

[Extracted from the return of J. H. Fisher, inspector.]

Name of steamboat.	Where employed.	Tons & 95ths.	Length.	Breadth.	Depth.	Where built.	By whom built.	Names of owners.
			ft. 10th.	ft. 10th.	ft. 10th.			
Citizen	Arch-street ferry to Camden	86 40	76 1	20 4	6 3	Philadelphia	Wm. Pennington	Champion, Correll, & Browning.
Kensington	Browning's ferry, N. L., to Camden	54 54	70 0	17 4	5 0	Philadelphia	John Vaughan	Champion, Correll, & Browning.
Linnæus	Philadelphia to Cape May	92 37	94 0	16 0	6 0	New York	E. Peck	Matthew C. Ralston.
Pennsylvania	Towing boats to Bristol	202 11	120 3	22 0	8 0	Philadelphia	Carter & VanDusen	Lehigh coal company.
Telegraph	Philadelphia to Wilmington	330 02	169 4	22 6	8 9	Philadelphia	John Vaughan	Wilmon Whilden, sen.
Chieftain	Philadelphia to Bristol	101 26	79 0	21 0	6 9	Philadelphia	J. Teese	Thomas Halloway.
Car of Commerce	Not employed at present	127 06	89 0	20 1	7 8	Philadelphia	Van Dusen & Byerly	Reilly & Van Amringe.
Ohio	Philadelphia to Newcastle	391 30	175 0	25 0	9 0	Philadelphia	Teese & Van Hook	Union line company.
Robert Morris	Philadelphia to Bordentown	279 82	137 0	24 0	9 0	Philadelphia	John Vaughan	Union line company.
Salem	Tow-boat on Schuylkill	121 85	95 0	21 8	6 5	Baltimore	- - -	Union line company.
Charleston	Philadelphia to Charleston, S. C.	569 15	201 4	24 1	12 0	Philadelphia	J. Vaughan & Son	Phil. and Char. st. packet co.
Delaware	Towing vessels in the bay and river Delaware.	301 52	151 8	21 0	9 8	Philadelphia	J. Vaughan & Son	Philadelphia steam tow-boat co.
Pennsylvania	Towing vessels in the bay and river Delaware.	299 36	150 8	21 0	9 8	Philadelphia	J. Vaughan & Son	Philadelphia steam tow-boat co.
New Philadelphia	Philadelphia to Bordentown	265 03	130 4	23 3	8 9	Philadelphia	J. Vaughan & Son	Camden and Amboy railroad co.
Philadelphia ice-boat	Breaking ice in the Delaware	524 50	174 2	26 3	12 0	Philadelphia	J. Vaughan & Son	Corporation of the city of Phila.
Experiment	Tow-boat Philadelphia to Bristol	60 00	84 0	14 5	5 3	New York	- - -	James Devoe.
Rhinoceros	Dredging along the Del. wharves	30 00	–	–	–	Philadelphia	Wm. Pennington	R. Walker.
Schuylkill, A	Tow-boat on Schuylkill	38 15	89 0	11 0	4 0	Philadelphia	James Wilson	Del. coal and Schuyl. tow-boat co.
Schuylkill, B	Two-boat on Schuylkill	48 75	61 0	16 0	5 6	Burlington	James Eyre	Del. coal and Schuyl. tow-boat co.
Robert Wharton	Philadelphia to Greenwich and Gloucester points.	83 52	76 1	19 2	6 4	Philadelphia	Wm. Pennington	Robert W. Sykes.
New Jersey	Philadelphia to Greenwich and Gloucester points.	85 48	80 0	19 5	6 1	Bordentown	R. & J. R. Jacques	Robert W. Sykes.

H 3—Continued.

Name of steamboat.	Name of captain or master.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	When built.	How long engine in use.	How long boilers in use.	Remarks.
Citizen	Wm. Richards	Wm. Richards	25	Low	Thos. Halloway	1829	1829	Since 1829	About 1 year	Rebuilt in 1837.
Kensington	Geo. Stockbine	Geo. Stockbine	15	Low	Thos. Halloway	1830	1830	1830	Since 1830.	
Linnæus	Wm. Reeves	J. Evans	35	Low	J. P. Allaire	1824	1824	1824	One year.	
Pennsylvania	J. Devoe	L. Devoe	40	Low	Rush & Muhlenberg	1818	1818	1818	Two years.	
Telegraph	W. Whilden, jr.	Geo. Thorn	120	Low	Thos. Halloway	1836	1836	1836	Since 1836.	[Norfolk, Va.
Chieftain	J. Felton	J. Middleton	50	Low	Thos. Halloway	1838	1838	1838	Nearly a year	Since sold and sent to
Car of Commerce	Unemployed	- -	2 of 35	High	Jacob Green	1836	1836	1836	Since 1836	Unemployed.
Ohio	Lewis Davis	J. Johnson	165	Low	Rush & Muhlenberg	1832	1832	1832	2 boilers, 1832.	
Robert Morris	Jacob M. Douglass	B. Keich	159	Low	Thos. Halloway	1830	1830	1830	Since 1830.	
Salem	Wm. Trout	Wm. Trout	31	Low	Watchman & Brandt	1830	1830	1830	Since 1835	Thoroughly repaired.
Charleston	Unemployed	- -	2 of 120	Low	Morris & Co.	1836	1836	1836	Since 1836	Laid up for want of em-
Delaware	- -	Wm. Sheppard	2 of 75	High	Rush & Muhlenberg	1836	1836	1836	Since 1836.	ployment.
Pennsylvania	Wm. Skellinger	J. Rutherford	2 of 75	High	Daniel Large	1835	1835	1835	Since 1835.	
New Philadelphia	Robert Allen	David S. Craven	222	Low	R. L. Stevens & Co.	1825	1825	1825	Since 1833.	
Philadelphia ice-boat	Unemployed	- -	2 of 25	High	M. Baldwin	1837	1837	1837	One winter	Employed during win-
Experiment	D. P. Lukens	D. P. Lukens	35	Low	Thos. Halloway	1830	1830	1830	Since 1830.	ter season.
Rhinoceros	R. Walker	R. Walker	6	High	Rush & Muhlenberg	1833	1833	1833	Since 1833.	
Schuylkill, A	Jacob Ross	J. M. Reeves	10	High	Parrish & Johnson	1835	1835	1835	Since 1835	Overhauled in 1837.
Schuylkill, B	J. D. McKean	G. Dougherty	30	High	Parrish & Johnson	1837	1837	1837	Since 1838.	
Robert Wharton	- -	H. Miller	24	Low	Thos. Halloway	1833	1833	1833	Since 1833	Repairing at Kensing-
New Jersey	Samuel Tatem	John Brown	26	Low	Thos. Halloway	1836	1836	1836	During 1838.	ton.

JOHN KERN, Deputy Collector.

H 4.

COLLECTOR'S OFFICE,
Philadelphia, October 25, 1838.

SIR: The enclosed return of steam-engines completes the list of those employed in this district, and, when added to the return transmitted on the 11th September last, makes a total of two hundred and seventeen.

The additional return, of locomotives used on railroads and inclined planes, is not yet completed, but is expected to be so in a very short time.

I remain, very respectfully, your obedient servant,

JOHN KERN,
Deputy Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

H 5.

Return of steam-engines in use in the district of Philadelphia.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	No. of years in use.	Remarks, &c.
Phila. city	United States mint - -	United States -	30	Coining - -	High	['30 1829	Rush & Muhlenberg -	8½	In constant use
Phila. county	Falls woollen factory - -	J. & S. Winpenny	20	Manuf. woollen goods -	Do.	1835	James Flint - -	3	Horizontal.
" "	Jaggers's factory - -	George Jaggers -	8	Manuf. woollen carpet-yarn	Do.	1838	Unknown - -	–	Do.
" "	Dean's factory - - -	James Dean -	30	Manuf. do. & cotton goods	Low	1833	Hyde & Flint -	5	Do.
" "	Holman's factory - -	J. Holman -	30	Manuf. do. & cotton goods	High	1833	Unknown - -	5	Do.
Delaware "	Dutton & Son's tannery -	T. Dutton & Son	5	Grinding bark, &c. -	Do.	1837	Parrish & Johnson -	1	Do.
Philadelp'a "	McCollom's carpet factory -	Andrew McCollom	10	Manuf. ingrain carpeting -	Do.	1835	Built in Pittsburg -	3	Upright.
" "	Buck's bleaching factory -	C. N. Buck -	6	Bleaching cotton goods -	Low	1834	V. N. & J. Johnson -	4	Do.
" "	McCalmont's woollen and cotton factory	Geo. McCalmont	16	Manf. woollen & cotton goods	Do.	1834	V. N. & J. Johnson -	4	Do.
Montgom'ry "	Jamison's spinning-mill -	Samuel Jamison -	100	Spinning cotton yarn -	High	1838	French & Miller -	–	Horizontal.*
" "	Bridgeport steam-mill - -	G. M. Shainline -	12	Sawing lumber - -	Low	1837	M. W. Baldwin -	1	Do.
Philadelphia "	Manayunk anthracite iron furnace	J. Bryant & Co. -	6	Smelting iron-ore - -	High	1823	Hyde & Flint -	15	Upright.
Reading, Berks	Reading nail and iron works -	Keim, Whitaker, & Co.	180	Rolling iron, cutting nails, &c.	Do.	1835	McClure, Wade, & Co.	3	Horizontal.
" "	Ferry & Frill's saw and grist mill	Ferry & Frill -	40	Sawing timber, grinding grain, &c.	Do.	1821	Built in Pittsburg -	17	Do.
" "	Reading iron foundry and machine shop	Jones, Darling, & Co.	6	Making machinery, &c. -	Do.	1835	Built in Providence, R. I.	3	Do.
" "	Reading steam works - -	J. M. Jones & Co.	5	Making steam-engines &c.	Do.	1836	J. May Jones & Co. -	2	Do.
Hamburg "	Miller & Seeger's grist-mill -	Miller & Seeger -	15	Manufacturing flour -	Do.	1837	J. May Jones & Co. -	1	Do.
Lebanon "	Loose's grist-mill - -	John Loose -	15	Manufacturing flour -	Do.	1837	J. May Jones & Co. -	1	Do.
" "	Summit-level stationary engine -	Union Canal Co.	60 80	Pumping water into canal	Do.	–	Both built in Pittsburg	–	Do.
Schuylkill "	E. B. Hubley's coal mine - -	E. B. Hubley	60	Pumping water & raising coal	Do.	1838	J. May Jones & Co. -	–	Do.

Tamaque, Schuylkill	"	Little Schuylkill coal co's. shop	Little Schuylkill coal co.	5	Repairing locomotive engines	Do.	1837	J. May Jones & Co.	1	Do.
"	"	Lewis's coal mine	Samuel Lewis	20	Raising coal	Do.	1837	Haywood & Snyder	1	Do.
"	"	Potts's coal mine	George H. Potts	20 20	Raising coal	Do.	1837	Haywood & Snyder	1	Do.
"	"	F. B. Nichol's coal mine	E. B. Hubley	20	Raising coal	Do.	1837	Haywood & Snyder	1	Do.
"	"	North America coal co's. mine	N. Amer. coal co.	30 20	Raising coal	Do.	1835	Haywood & Snyder	3	Do.
"	"	Straub & Whitney's grist-mill	Straub & Whitney	15	Manufacturing flour	Do.	1837	Haywood & Snyder	1	Do.
"	"	Elliott's coal mine	——— Elliott	20	Raising coal	Do.	1837	Haywood & Snyder	1	Do.
"	"	Banner & Co's. coal mine	Banner & Co.	15	Raising coal	Do.	1836	Levi Morris & Co.	2	Do.
"	"	Parvin's grist-mill	——— Parvin	15	Manufacturing flour	Do.	1830	M. W. Baldwin	8	Do.
"	"	Haywood & Snyder's machine shop	Haywood & Snyder	4	Making steam-engines, &c.	Do.	1832	Haywood & Snyder	6	Do.
"	"	Port Clinton foundry	Park & Tiers	6	Working machinery	Do.	1832	Unknown	–	Do.
"	"	Valley furnace	Rev. Dr. Geissenhainer	60	Blowing furnace, &c.	Do.	1833	Built in New York	5	Do.†
"	"	Steam saw-mill	Unknown	6	Sawing timber	Do.	1830	Unknown	6	Do.
Dauphin	"	Hunt's rolling-mill	Thomas Hunt	50	Sawing timber & rolling iron	Do.	1829	Rush & Muhlenberg	9	Do.
"	"	Fox's iron foundry	John H. Fox	20	Iron f'dry, saw'g timber &c.	Do.	1812	Built in Pittsburg	26	Do.
York	"	Gartner's iron foundry	Israel Gartner	12	Blowing bellows, &c.	Do.	1826	In N. Y., by Mr. Davis	12	Upright.
Lancaster	"	City iron foundry and machine shop	Boon & Cockley	5	Blowing bellows, &c.	Do.	1837	M. W. Baldwin	1	Horizontal.
"	"	Lancaster foundry	Pennell & Lenhart	5	Blowing bellows, &c.	Do.	1838	Pennell & Lenhart	–	Do.
"	"	Weigand's tannery	H. S. Weigand	2	Grinding bark, &c.	Do.	–	Daniel Large	–	Upright.
"	"	Groff's factory	Samuel W. Groff	5	Manufacturing woollen goods	Do.	1838	Boon & Cockley	–	Horizontal
"	"	Markley's steam-mill	J. F. Markley	8	Sawing timber, &c.	Do.	1835	Rush & Muhlenberg	3	Do.
"	"	Smedley's foundry and machine shop	J. Smedley	5	Blowing bellows, &c.	Do.	–	Unknown	–	Do.
Marietta, Lancaster	"	Stepgins's saw-mill	——— Stepgins	15	Sawing timber	Do.	1837	Built in Pittsburg	1	Do.

* Has two cylinders, 50 horse each, and worked by one fly-wheel shaft.

† Using anthracite coal in the furnace.

PORT OF PHILADELPHIA, *October* 25, 1838.

D. K. MILLER, *Inspector.*

H 6.

COLLECTOR'S OFFICE,
Philadelphia, September 11, 1838.

SIR: I transmit a return of steam-engines employed in factories, &c., amounting, in the city and county of Philadelphia, to 171; and in other counties, 6 in number. At Frankford, Philadelphia county, and at Manyunk, Montgomery county, there are some which will form an additional return when ascertained. Those used in Dauphin and Chester counties have been derived from the makers of the engines.

At the request of the collector, I ask whether it will be necessary for Mr. Miller to proceed further, and what range of counties, if necessary, he should take? so that he may set about it immediately.

The return of steamboats will be forwarded this week.

Yours, very respectfully,
JOHN KERN, *Deputy Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of stationary steam-engines in use in the district of Philadelphia.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks, &c.
								Y'rs.	
County of Philad'ia	F. Klett's white-lead mill -	Frederick Klett -	4	Grinding white lead -	High	1836	Sutton & Blumner -	2	Horizontal.
" "	Rogers's gas-pipe manufac.	Thomas Rogers, jr. -	5	Making gas-pipes -	Do.	1838	James T. Sutton -	–	Do.
City "	E. Watson & Co's steam-bakery.	E. Watson & Co. -	10	Manufacturing biscuit	Do.	1836	Sutton & Blumner -	2	Do.
County "	Brooks's steam-engine and machine manufactory.	James Brooke -	5	Steam-engine and machine making.	Do.	1830	Stacy Costill -	8	Vibrating.
" "	Hampton's screw-auger manufactory.	Lewis W. Hampton -	2	Manuf. screw-augers	Do.	1836	Lewis W. Hampton -	2	Horizontal.
" "	Patton's steam-planing mill	James M. Patton -	30	Work'g Carolina boards	Do.	1830	Rush & Muhlenberg -	2	Upright.
City "	Evans's press & screw manufactory.	Charles Evans -	6	Manufacturing screws and presses.	Do.	1836	Charles Evans -	2	Horizontal.
" "	Bates's fire-engine manufac.	Joel Bates -	4½	Turning machinery -	Do.	1836	Joel Bates -	2	Do.
" "	Abbott & Newlin's brewery	Thomas Morris -	4	Making malt liquor -	Low	1820	Thomas Halloway -	18	Do.
" "	G. D. Wetherill's drug mill	George D. Wetherill	8	Grind'g white lead, &c.	High	1834	Rush & Muhlenberg -	4	Do.
" "	J. T. Sutton's steam-engine manufactory.	James T. Sutton -	5	Driving machinery -	Do.	1830	Matthew Baldwin -	8	Do.
" "	Garrett, Eastwick, & Co., locomotive engine builders	Garrett, Eastwick, & Co.	5	Working machinery -	Do.	1834	Garrett, Eastwick, & Co.	4	Vibrating.
" "	Wetherill & Brother's white-lead works.	Wetherill & Brother -	10	Grind'g white lead, &c.	Low	1808	Daniel Large -	30	Upright.
County "	B. Taylor & Co's mahogany mill.	Benj. Taylor & Co. -	24	Sawing mahogany -	High	1836	James Flint -	2	Horizontal.
" "	Scattergood & Boustead's tannery.	Scattergood & Boustead	5	Grinding bark -	Do.	1831	M. Baldwin -	7	Do.
" "	Nowland's iron foundry -	Michael Nowland -	3	Fanning bellows -	Do.	1836	Sutton & Blumner -	2	Do.
" "	Penn Township steam mill	David Coggins -	12	Grinding plaster & grain	Do.	1831	David Coggins -	7	Upright.
" "	Hallowell's steam mill -	Eli Hallowell -	4	Turning in wood -	Do.	1836	Sutton & Blumner -	2	Horizontal.

H 2—Continued.

Name of boat.	Name of captain.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine constructed.	How long engine in use.	How long the boilers in use.
Wm. Wray	Frederick Roth	Thomas Hinksman	30	Low	Thomas Halloway	1829	Since 1829	Since 1835.
Philadelphia	Samuel Dougherty	Benjamin Brown	30	Low	Do do	1828	1828	About one year.
Delaware	William Down	William Irvings	25	Low	Do do	1829	1829	About one year.*
Camden	John Beagary	Jacob Bender	25	Low	Do do	1829	1829	Since 1829.
Citizen	William Richards	William Richards	25	Low	Do do	1829	1829	Since 1837.†
Kensington	George Stockbine	G. Stockbine	15	Low	Do do	1830	1830	Since 1830.
Southwark	J. Stone	J. Stone	15	Low	Do do	1829	1829	Since 1829.
Kaighn's Point	B. Sutton	B. Sutton	20	Low	Do do	1832	1832	Since 1832.
State Rights	C. Morgan	N. E. Davis	65	Low	R. L. Stevens & others	1833	1833	Since 1833.
John Fitch	George English	George Wade	65	Low	Do do	1837	1837	Since 1837.
Linnæus	William Reeves	J. Evans	35	Low	J. P. Allaire	1824	1824	About one year.
Flushing	G. T. Boon	William Platt	22	Low	Do	1832	1832	About one year.
Pennsylvania	L. Devoe	L. Devoe	40	Low	Rush & Muhlenberg	1818	1818	About two years.
Philadelphia	James Cox	C. Green	60	Low	Do do	1827	1827	About five years.
Telegraph	W. Whelden, jr.	George Thorn	120	Low	T. Halloway	1836	1836	About two years.
Chieftain	J. Felton	—— Middleton	50	Low	Do	1838	1838	Since 1838.‡
Car of Commerce	No captain	No engineer	2 of 35	High	Jacob Green	1836	1836	Since 1836.§
Ohio, (1)	Lewis Davis	J. Johnson	165	Low; two condensing eng's.	Rush & Muhlenberg	1832	1832	Two boilers, 1832.
Robert Morris, (2)	M. Douglass	B. Keich	159	Low; one condensing eng'e.	Thomas Halloway	1830	1830	Two boilers, 1830.
Salem, (3)	William Trout	William Trout	31	Low	Watchman & Brandt	1830	1830	Since 1835.

* The boiler burst on the Jersey side 18 months since. One man lost his life.

† Rebuilt in 1837.

‡ Since sold to Norfolk.

§ Intended to run through the canal to Baltimore, but was too large. Sunk at the wharf during the winter of 1837. Has since been raised.

H 2—Continued.

Name of boat.	Where employed.	Tons & 95ths.	Length.	Breadth.	Depth.	Where built.	When built.	By whom built.	Names of owners.
			Ft. in.	Ft. in.	Ft. in.				
Charleston -	Philad'a to Charleston	569 50	201 4	24 1	12 0	Philadelphia -	1836	J. Vaughn & Son -	Wilson & others.
Wilmington, of Del.	*Philad'a to Wilming'n	278 41	156 0	22 6	8 3	Do -	1829	Samuel Grice -	Wm. W. Young & others.
Delaware -	Towing vessels on the Delaware.	301 52	151 8	21 0	9 8	Do -	1836	J. Vaughn & Son -	Philadelphia steam tow-boat company.
Pennsylvania -	Do do	299 36	150 8	21 0	9 8	Do -	1835	Do do -	Do do
New Philad'a, (4)	Philad'a to Bordentown	265 3	130 4	23 4	8 9	Do -	1825	Do do -	Camden & Amboy rail-road company.
Burlington, (5) -	* Do do	–	–	–	–	Hoboken, N. J. -	1826	– –	Do do
City ice-boat -	Breaking ice in the Delaware.	526 50	174 2	26 3	12 0	Philadelphia -	1837	Do do -	Corporation of the city of Philadelphia.
Pioneer, (6) -	*Philadelphia to Salem	211 8	141 8	18 5	8 0	Do -	1835	Do do -	Salem, Delaware, & Philadelphia steamboat co.
Experiment -	Tow-boat from Bristol to Philadelphia.	60 00	84 0	14 5	5 3	New York -	1831	– –	James Defoe.
Schuylkill, A -	As a tow-boat on the Schuylkill.	38 15	89 0	11 0	4 0	On Schuylkill -	1835	James Wilson -	Delaware coal company & Schuylkill tow-boat co.
Schuylkill, B -	Do do	48 75	61 0	16 0	5 6	Burlington -	1837	James Eyres	Do do
Rhinoceros -	Dredging along the Delaware.	30 00	–	–	–	Philadelphia -	1833	William Pennington	R. Walker.
Wasp -	*Bristol to Burlington -	26 12	45 0	14 0	5 0	Do -	1832	Charles Thompson -	J. Bessoneth & others.
Hudson -	*Tow-boat, Bristol, Philad'a, and Schuylkill.	148 22	108 0	23 0	6 5	New York -	1825	– –	Buckman & others.
Robert Wharton -	Philad'a, Greenwich, and Gloucester points.	83 52	76 1	19 2	6 4	Philadelphia -	1833	William Pennington	R. W. Sykes.
New Jersey -	Do do	85 48	80 0	19 5	6 1	Bordentown -	1836	R. & S. R. Jacques	Do
Clifton -	*Philadelphia to Salem	162 56	137 0	18 0	6 8	New York -	1837	—— Vanderbilt -	G. T. Boon.

The horse-power of the steamboats marked 1, 2, 3, 4, 5, 6, was calculated at this office, as the same could not be furnished by the owners or engineers. (See reports of the inspector, J. H. Fisher.)

The steamboats marked thus * are not enrolled or licensed in this district, but ply on the Delaware river, and come to this city, and may be returned from other districts.

H 7—Continued.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks, &c.
								Y'rs.	
County of Philad'ia	Merwin's steam saw mill -	Thomas Merwin -	20	Sawing marble & stone	High	1835	Rush & Muhlenberg -	3	Upright.
" "	Hartshorne's steam-engine manufactory.	Wm. M. Hartshorne	8	Manufacturing steam-engines.	Do.	1838	William D. Parrish -	–	Do.
" "	Belfield's brass foundry -	Henry Belfield -	3	Turning brass, &c. -	Do.	1837	Alex. McCausland -	1	Horizontal.
" "	Ingrain carpet manufactory	Caspar Rehn -	8	Driving woollen mach'y	Do.	1834	Prosper Martin -	4	Do.
" "	Sterr's marble saw mill -	George Sterr -	18	Sawing marble -	Do.	1837	Rush & Muhlenberg -	1	Do.
" "	Neisser's comb manufactory	Augustus F. Neisser	3	Manufac. hair combs -	Do.	1832	M. Baldwin -	6	Do.
" "	Cooper's snuff mill -	Francis Cooper -	6	Grinding snuff -	Do.	1831	Rush & Muhlenberg -	7	Do.
" "	Lowber's tannery -	W. & D. Lowber -	4	Grinding bark -	Low	1823	Thomas Halloway -	5	Upright.
City "	Kay's printing office -	James Kay & Brother	2	Working printing press	High	1837	Grear & Brother -	1	Horizontal.
" "	Alexander's printing office	Charles Alexander -	4	Do. do. -	Do.	1834	Sutton & Blumner -	4	Do.
" "	Penn factory - -	Penn factory co. -	18	Making woollen goods	Do.	1830	Rush & Muhlenberg -	8	Upright.
County "	People's works - -	Anthony Davis -	12	Iron foundry -	Do.	1838	James Flint -	–	Horizontal.
" "	Do. - -	Do. -	6	Do. - -	Do.	1837	Do. -	1	Do.
" "	Cummings's steam glue manufactory.	Charles Cummings -	8	Manufact'ng and driving machinery.	Do.	1836	Do. -	2	Do.
" "	Ingrain-carpet factory -	Wm. Cheethim -	10	Manufacturing carpets	Do.	1836	Do. -	2	Upright.
City "	Atkinson's printing office -	Samuel C. Atkinson -	3	Working print'g presses	Do.	1838	D. & C. Large -	–	Horizontal.
" "	Harding's paper-mill and printing office.	Jesper Harding -	25	Making paper and working printing presses.	Do.	1836	Rush & Muhlenberg -	2	Do.
" "	A. S. & E. Roberts & Co., druggists.	A. S. & E. Roberts, & Co.	5	Grinding white lead, putty, &c.	Do.	1833	Levi Morris -	5	Upright.
" "	Bouvier's steam saw-mill -	Michael Bouvier -	20	Sawing marble and mahogany.	Do.	1835	Jacob Green -	3	Do.
" "	Cosfeldt's smithery -	Frederick Cosfeldt -	2	Driving machine -	Do.	1837	—— McIlvaine -	1	Do.
" "	Carver's turning shop -	Isaac Carver -	3	Do. - -	Do.	1837	Stacy Costill -	1	Vibrating.
" "	Franklin factory - -	Wm. H. Spackman -	22	Driving cotton and flax machinery.	Low	1831	James Flint -	7	Upright.
" "	Pine-street factory -	W. & D. Watt -	20	Do. do. -	High	1837	William D. Parrish -	1	Horizontal.

"	"	M. Lewis & Co's lead-works	M. Lewis & Co. -	20	Grinding white lead & mak'g flaxs'd oil.	Do.	1837	Levi Morris & Co. -	7	Upright.
"	"	Do. - -	Do.	25		Do.	1836	Do. do. -	2	Horizontal.
County	"	Philadelphia alms-house -	Corporation of the poor	12	Working machinery -	Do.	-	Do. do. -	-	Do.
City	"	Public Ledger printing office	Swaine, Able, & Simmons.	4	Working printing-presses.	Do.	1837	West Point foundry -	1	Do.
"	"	Abbott's brewery - -	William Abbott -	5	Grinding malt, &c. -	Low	1820	Thomas Halloway -	18	Upright.
"	"	Martien's printing office -	William Martien -	4	Working presses -	High	1837	James Brooke -	1	Horizontal.
County	"	Doyle & McNeely's leather manufactory.	Doyle & McNeely -	10	Fulling oil leather and grinding bark.	Do.	1832	M. Baldwin -	6	Do.
City	"	Taylor's engraving shop -	John Taylor -	3	Turning lathes -	Do.	1835	James Brooke -	3	Do.
"	"	Lovering & Co's steam sugar refinery.	Joseph S. Lovering & Co.	16	Refining sugar -	Low	1826	James T. Sutton -	12	Upright.
"	"	Kimber & Sharpless's printing office.	Kimber & Sharpless -	2	Working presses -	High	1836	Garrett & Eastwick -	2	Vibrating.
"	"	J. H. Palethorpe's block-tin manufactory.	J. H. Palethorpe & Co.	3	Making pewter-ware -	Do.	1832	M. Baldwin -	6	Horizontal.
"	"	J. Y. Humphreys's playing-card manufactory.	J. Y. Humphreys -	2½	Glazing paper -	Do.	1833	M. Baldwin -	5	Do.
"	"	Wiegand & Snowden, surgical-instrument makers.	Wiegand & Snowden	5	Making surgical instruments.	Do.	1836	Sutton & Blumner -	2	Do.
"	"	Rorer's surgical-instrument manufactory.	John Rorer & Son -	2	Making surgical instruments.	Do.	1836	Joseph Buckley -	2	Upright.
"	"	Sherman & Co's print. office	C. Sherman & Co. -	2½	Working presses -	Do.	1838	M. M. & T. Grear -	-	Horizontal.
"	"	Collins's printing office	T. K. & T. G. Collins	4	Working presses -	Do.	-	M. M. & T. Grear -	-	Do.
"	"	Ewing's lead-pipe manuf'ry	J. O. Ewing -	4	Manufacturing leaden pipe.	Do.	1834	Levi Morris & Co. -	4	Upright.
County	"	Eastern State penitentiary -	State of Pennsylvania	6	Driving machinery -	Do.	1835	Levi Morris & Co. -	3	Horizontal.
City	"	Hewitt's sugar refinery -	Thomas Hewitt -	6	Refining sugar -	Do.	1833	Prosper Martin -	5	Upright.
"	"	Wilbanks's brass and bell foundry.	John Wilbank -	1½	Manufacturing church and house-bells.	Do.	1836	Stacy Costill -	2	Horizontal.
"	"	McDaniel's coach-spring manufactory.	John McDaniels -	3	Manufacturing coach-springs.	Do.	1837	James Brooke -	1	Do.
"	"	Gordon's steam drug and plaster mill.	M. L. Gordon -	10	Grinding drugs and plaster of Paris.	Do.	1837	William D. Parrish -	1	Do.
"	"	Biles's steam drug mill -	Thomas J. Biles -	8	Grinding drugs, &c. -	Do.	1829	Levi Morris & Co. -	9	Upright.
"	"	Morris's iron works -	Levi Morris & Co. -	10	Driving machinery -	Do.	1829	Levi Morris & Co. -	9	Do.
"	"	Richards's patent floor-planing mill.	Mark Richards -	16	Planing and grooving floor-boards.	Do.	1837	Rush & Muhlenberg -	1	Horizontal.

11

H 7 Continued.

Place.	Name of mill or manufactory.	Names of owners.	Horse power.	For what purpose used.	Water or high pressure.	When built.	By whom constructed.	Number in use from 1838.	Remarks, &c.
City of Philada.	Pepper, Smith, & Sedgley's brewery.	George Pepper	9	Pumping water and grinding grain.	High	1837	Sutton & Blummer	1	Horizontal.
Comm'r.	Pascal iron works	Morris, Tasker, & Co.	30	Manuf'ing coal grates, furnaces, & welded wrought iron tubes.	Do.	1836	Levi Morris & Co.	2	Do.
City.	Silk manufactory	Philadelphia Silk Co.	6	Making sewing silk	Do.	1830	Garrett & Eastwick	2	Do.
Comm'r.	Brooke's machine manufac	Ignatius Brooke	2½	Driving machin'y, &c.	Do.	1834	Rush & Muhlenberg	4	Upright.
"	Pugh's paper factory	Isaac Pugh	4	Manufacturing paper	Do.	1829	Levi Morris & Co.	2	Do.
City	Leadbetter's iron foundry	Joseph Leadbetter	9	Driving machinery	Low	1837	Daniel Large	1	Do.
"	Peter's brewery	F. & M. S. Peter	6	Grinding malt, &c.	Do.	1826	Thomas Halloway	13	Do.
Comm'r.	McMillan's brass foundry & coach axle manufactory	Charles McMillan	6	Driving machinery and making coach axles.	High	1836	James Brooke	2	Rotary.
"	Gaugen's wood screw mann	Lewis Gaugen	4	Manuf. wood screws	Do.	1832	Prosper Martin	5	Upright.
"	Moore & Co's wire mand	A. Moore & Son	14	Cap and bonnet wire manufacturing.	Do	1837	Joseph Moore	1	Horizontal.
"	Smith's tannery	John T. Smith	5	Grinding bark, &c.	Do.	1832	Rush & Muhlenberg	6	Do.
"	Keen & Coate's tannery	John E. Keen	10	Do. do.	Do.	1832	Thomas Halloway	6	Do.
"	Globe mill cotton factory	Crabb, Holmes, & Co.	20	Spinning and weaving cotton goods.	Low	1810	Daniel Large	28	Upright.
"	Do do	Do do	22	Spinning and weaving cotton goods.	Do.	1828	John Walshaw	10	Do.
"	Jackson's turning and cotton machine manufactory.	Samuel Jackson	3	Making cotton machinery.	High	1832	Prosper Martin	6	Horizontal
"	Jackson's turning and cotton machine manufactory.	Do.	6	Making cotton machinery.	Do.	1838	Samuel Jackson		Do.
"	Ellis's plaster mill	Z. Ellis	4	Grinding plaster	Do.	1836	Stileman & Woolly	2	Do.
"	Wright's dying factory	James Wright	5	Sizing & coloring cotton goods.	Do.	1837	Rush & Muhlenberg	1	Do.
"	Hutchinson's drug mill	B. Hutchinson	8	Grinding drugs, &c.	Do.	1838	Daniel Large	-	Do.
"	Moore's paper mill	Gabriel Moore	15	Making paper	Do.	1838	James T. Sutton	-	Do.

"	"	Garsed & Saxton's mach. fac.	Garsed & Saxton -	4	Making millwright w'k and machinery.	Do.	1838	Garsed & Saxton -	-	Do.
"	"	Halloway's steam-engine manufactory.	Thomas Halloway -	4	Manufacturing steam-engines.	Low	1821	Thomas Halloway -	17	Upright.
"	"	Point Pleasant foundry -	Park & Tiers -	6	Blowing cupola and welding iron.	Do.	1832	Hyde & Flint -	6	Do.
"	"	Soho works - -	C. Large - -	12	Manufact'ing st'm-engines, &c.	High	1836	C. Large - -	2	Do.
"	"	Do. - -	Do. - -	6		Do.	1836	Do. - -	2	Horizontal.
"	"	Howell's tilt-hammer works	P. S. Howell -	6	Making ship iron work	Do.	1835	Rush & Muhlenberg -	3	Do.
"	"	Kensington cotton mills -	Burtis, Keen, & Rushton.	30	Spinning cotton -	Do.	1836	James Taws - -	2	Upright.
"	"	Gillingham & Wainwright's steam saw-mill.	Gillingham & Wainwright.	12	Sawing lumber -	Do.	1832	Levi Morris & Co. -	6	Do.
"	"	Byerly & Van Dusen's ship-yard.	Byerly & Van Dusen	3	Turning grindstone & pumping water.	Do.	1836	Thomas Chapman -	2	Horizontal.
"	"	Kensington white-lead works	Manuel Eyre -	15	Grinding white-lead, &c.	Low	1834	James Flint - -	4	Upright.
"	"	Elm-tree factory - -	J. Ashhead & Co. -	10	Refinishing woollen goods.	High	–	- - -	–	Do.
"	"	Union glass works - -	Union Glass Works Co.	12	Cutting glass, &c. -	Low	1832	N. & J. Johnson -	6	Robb's safety-valve used.
"	"	Dyott, Baldwin, & Hazelton's rotary steam-engine factory.	M. B. Dyott -	60	Building rotary steam-engines.	High	1838	Dyott, Baldwin, & Hazelton.	–	Rotary.
"	"	Uhler's white-lead works -	George Uhler -	12	Grinding white-lead & grain.	Do.	1831	Hyde & Flint -	7	Upright.
"	"	Harrison's white-lead works	John Harrison & Son	12	Grinding white-lead & grain.	Do.	1831	Rush & Muhlenberg -	7	Do.
"	"	M. Starr & Son's steam-boiler manufactory.	Moses Starr & Son -	4	Manufacturing steam-boilers.	Do.	1836	James Brooke -	2	Horizontal.
"	"	E. Davis's white-lead works	Elijah Davis -	8	Grinding white-lead, &c.	Do.	–	Levi Morris & Co. -	–	Do.
City	"	Wetherill & Brother's white-lead works.	Wetherill & Brother	6½	Grinding white-lead, &c.	Low	1804	Daniel Large -	34	Upright.
County	"	Christian-street whiskey distillery.	Thomas Gaff -	30	Grinding grain, &c. -	High	1828	Rush & Muhlenberg -	9	Do.
"	"	Snyder & Price's machine shop.	Snyder & Price -	5	Making iron machinery	Do.	1838	Stacy Costill -	–	Vibrating.

H 7—Continued.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks, &c.
								Y'rs.	
County Philada.	Southwark steam saw-mill -	Hay & Lowndes -	30	Sawing mahogany, &c.	High	1837	Levi Morris & Co. -	1	Horizontal.
" "	Gannt's button manufactory	David Gannt -	2	Manufact'ng buttons	Do.	1832	Stacy Costill -	6	Vibrating.
" "	Everly's button manufactory	M. N. Everly -	2	Manufac. buttons, &c.	Do.	1832	Stacy Costill -	6	Do.
" "	North's factory - -	——— North -	4	Making buttons and grinding grain.	Do.	1835	Stacy Costill -	3	Do.
" "	Lawrence, Myers, & Co's iron foundry.	Lawrence, Myers, & Co.	8	Blowing cupola and working machinery.	Do.	1837	Rush & Muhlenberg -	1	Horizontal.
" "	Hamson's button manufac. -	Joseph Hamson -	3	Manuf. bone buttons	Do.	1831	Stacy Costill -	7	Vibrating.
" "	Markland's button manufac.	Thomas Markland -	4	Making pearl and bone buttons.	Do.	1829	Thomas Halloway -	9	Upright.
" "	Hubbs & Arnold's print wks.	Hubbs & Arnold -	15	Printing & dying cotton goods.	Do.	1835	Rush & Muhlenberg -	3	Horizontal.
" "	Tier's ivory black manufac.	C. Tiers - -	5	Making ivory black, & refining sugar.	Do.	1837	M. Baldwin -	1	Do.
Chester county -	B. Way & Co's saw-mill -	B. Way & Co. -	5	Sawing lumber -	Do.	1832	Stacy Costill -	6	Vibrating.
County Philada.	Lagrange print works -	Perkins & Wendell -	5	Printing calico, &c. -	Do.	1832	Stacy Costill -	6	Do.
" "	Lagrange print works -	Perkins & Wendell -	20	Do. do.	–	–	Levi Morris & Co. -	–	Horizontal.
Harrisb'g, Dauphin county.	Graydon's iron foundry -	Alexander Graydon -	8	Working machinery in iron works.	–	–	Levi Morris & Co. -	–	Do.
Pottsville, Schuylkill county.	Patterson's coal mine -	Bird, Patterson & Co.	20	– –	–	–	Levi Morris & Co. -	–	Do.
Do. do.	Pumroy's iron foundry -	Benjamin T. Pumroy	8	– –	–	–	Levi Morris & Co. -	–	Do.

PORT OF PHILADELPHIA, *August* 31, 1838.

D. K. MILLER, *Inspector.*

Additional returns.

County Philada.	Whiticar's mill - -	W. Whiticar -	15	Manuf. cotton goods -	High	1836	James Flint - -	2	Horizontal.
" "	Horrick's dye-works -	Jeremiah Horricks -	20	Driving calenders -	Do.	1830	Oliver Evans -	8	Do.
" "	Horrick's dye-works -	Jeremiah Horricks -	8	Driving calenders -	Do.	1830	Constructed in Pitts'bg	8	Do.
" "	Jenks's iron foundry & cotton-machine manufactory.	Alfred Jenks -	24	Driving machinery & making machinery.	Do.	1832	Rush & Muhlenberg -	6	Upright.
County Montgom'y	Dager's marble quarry -	——— Dager -	10	Pumping water, &c. -	Do.	–	Levi Morris & Co. -	–	Horizontal.
County Philada.	Fisher's factory - -	W. Fisher - -	8	Dying and bleaching -	Do.	–	Levi Morris & Co. -	–	Do.
" Montgom'y	French & Miller's machine-shop.	French & Miller -	5	Making machinery -	Do.	–	Levi Morris & Co. -	–	Do.
" Philada.	Large's factory - -	John Large - -	12	Dying and bleaching -	Do.	–	Levi Morris & Co. -	–	Do.
" "	Briggs's factory - -	——— Briggs -	20	Dying and bleaching -	Do.	–	Levi Morris & Co. -	–	Do.
City "	Sutherland's lead-pipe manf.	John Sutherland -	6	Manufac. lead pipes -	Do.	1834	Rush & Muhlenberg -	4	Upright.
" "	Osborn's feather renovating factory.	P. Osborn -	3	Cleaning feathers -	Do.	–	Stacy Costill -	–	Vibrating.
" "	Ashmead & Co's. print. office	Sunday-school union -	5	Working print. presses	Do.	1830	M. W. Baldwin -	8	Horizontal.
" "	Searle's factory - -	W. N. Searle -	3	Blowing furs -	Low	1833	Unknown - -	–	Upright.
County "	Southwark whiskey distillery.	John Maitland -	14	Driving machinery & grinding grain.	High	–	Unknown - -	–	Horizontal.
" "	Brooks & Longmire's brew'y	Brookes & Longmire	5	Pumping and mashing malt.	Do.	1836	Levi Morris & Co. -	–	Do.
" "	Baldwin's steam-engine man.	M. W. Baldwin -	15 5	Man. steam engines &c.	Do.	1837 1831	M. W. Baldwin -	1 7	Do. Upright.
" "	Railroad print works -	Joseph Siddall -	8	Printing calicoes -	Do.	1829	Levi Morris & Co. -	9	Do.
" "	Bush-hill cap manufactory -	Edmund Brown -	15	Dressing furs -	Do.	1836	M. W. & T. Grear -	2	Horizontal.
" "	Murphey's machine shop -	John Murphey -	5	Making car-wheels and axles.	Do.	1833	M. W. Baldwin -	5	Do.
" "	Mar's works - -	Rush & Muhlenberg -	4	Making machinery,	Do.	1832	Rush & Muhlenberg -	6	Do.
" "	Mar's works - -	Rush & Muhlenberg -	6	steam-engines, &c.	Do.	1838	Rush & Muhlenberg -	–	Do.
City "	Durkee's steam grist-mill, &c.	Zeba Durkee -	10	Grinding grain, and making locomotive steam-engines.	Do.	1836	Rush & Muhlenberg -	2	Do.
County "	Norris's locomotive steam-engine manufactory.	William Norris -	6	Making locomotive steam-engines.	Do.	1836	Levi Morris & Co. -	2	Upright.

H 7—Continued.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks, &c.
								Y'rs.	
County Philada.	Macauley & Son's ingrain carpet manufactory.	Macauley & Son -	12	Manufacturing ingrain carpeting.	High	1835	Levi Morris & Co. -	3	Upright.
" "	Columbia factory - -	William Cook -	5	Making bone buttons -	Do.	1835	Jacob Green -	3	Horizontal.
" "	Aurora print works -	Peter Hill - -	12	Printing calicoes -	Do.	1836	Sellers & Co. -	2	Do.
" "	McBride's cotton factory -	Samuel McBride -	10	Printing calicoes -	Do.	1834	Levi Morris & Co. -	4	Upright.
" "	Spring-mill factory -	Joseph Fleming -	12	Spinning and weaving cotton goods.	Do.	1832	Rush & Muhlenberg -	6	Horizontal.
" "	Dearey's factory - -	J. & G. Dearey -	10	Manufacturing woollen goods.	Do.	1838	Levi Morris & Co. -	–	Upright.
" "	Lewis & Phillips's factory -	Lewis & Phillips -	25	Manufacturing cotton goods.	Do.	1832	Levi Morris & Co. -	6	Do.
City "	Smyth's grain distillery -	Samuel Smyth -	60 / 6	Pumping water and grinding grain.	Do. / Do.	1835 / 1838	Sutton & Blumner - / James T. Sutton -	3 / –	Horizontal. / Do.
" "	Bromley's smithery -	William Bromley -	3	Turning in iron -	Do.	1834	Unknown -	4	Do.
County "	Stoke's grist-mill - -	W. H. Stokes -	15	Grinding grain -	Do.	1834	W. & T. Grear -	–	Do.
" "	Crout's turner-shop -	William Crout -	3	Turning in wood -	–	–	W. & T. Grear -	–	Do.
City "	Haydock's lead pipe manuf.	Samuel Haydock -	4	Making leaden pipe -	Do.	1828	Unknown -	10	Upright.
County "	Womrath's factory -	George F. Womrath -	6	Making cotton wadding.	Do.	1837	James Flint -	1	Horizontal.
" "	West Philadelphia works -	Parrish & Johnson -	10	Making steam-engines and machinery.	Do.	1838	Parrish & Johnson -	–	Do.
" "	Lennig's chemical works -	N. Lennig & Co. -	25	Manufacturing drugs -	Do.	1837	Parrish & Johnson -	1	Do.
" "	Howell & Brothers' factory	Howell & Brothers -	5	Manufacturing paper-hangings.	Do.	1838	Parrish & Johnson -	–	Do.
City "	Sellers & Pennock's machine card-factory.	Sellers & Pennock -	4	Driving card machinery.	Do.	1837	C. Sellers & Son -	1	Do.

"	"	Dohnert's marble-paper manufactory.	—— Kates	2	Making marbled paper	Do.	1836	—— Rowland	2	Vibrating; and using Rowland's patent.
"	"	O'Hara's factory	John O'Hara	3	Manufacturing umbrella furniture.	Do.	1838	Alexander McCausland	–	Upright.
"	"	Green's button manufactory	—— Green	5	Manufacturing pearl buttons.	Do.	1828	M. W. Baldwin	10	Horizontal.
County	"	Bromley's cap manufactory	H. Bromley	8	Manufacturing fur caps.	Low	1836	Rush & Muhlenberg	2	Do.
"	"	Arnold's steam-engine manufactory.	John Arnold	15	Making steam-engines and machinery.	High	1838	John Arnold	–	Do.
"	"	Frick's brass foundry	Jacob Frick	3	Turning in brass, &c.	Do.	1836	Jacob Frick	2	Do.
"	"	Bridgewater works	James Brookes	20	Manufacturing steam-engines and machinery.	Do.	1837	James Brookes	1	Do.
"	"	Morris's dye works	—— Morris	25	Dying and bleaching	Do.	1836	James Flint	2	Do.
"	"	Campbell's steam-engine manufactory.	H. Campbell	3	Manufacturing steam-engines and machinery.	Do.	1837	M. W. & T. Grear	1	Do.
"	"	Merick & Agnew's fire-engine manufactory.	Merick & Agnew	12	Making fire-engines and machinery.	Do.	1828	Merick & Agnew	10	Upright.
"	"	Merick & Agnew's iron foundry and steam-engine manufactory.	Merick & Agnew	6 20	Making steam-engines and machinery.	Do. Do.	1837 1838	Merick & Agnew Merick & Agnew	1 –	Horizontal. Do.
City	"	Steam mantel factory	Sailer & Schell	6	Sawing marble, &c.	Do.	1828	Rush & Muhlenberg	10	Upright.
County	"	Good Intent factory	Edward Wrigley	60	Manuf'ing and printing woollen goods.	Do.	1837	Rush & Muhlenberg	1	Horizontal. Have had one explosion; no lives lost, and no injury to the works.

SEPTEMBER 10, 1838.

D. K. MILLER, *Inspector.*

H 8.

Return of locomotive engines used in the district of Philadelphia.

Names of railroads.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Philadelphia, Norristown, and Germantown railroad	Ironsides	10	High	1832	Baldwin	5 years	Upon the Philadelphia, Norristown, and Germantown railroad, there have been three persons killed; two of them lost their lives by attempting to enter the cars when they were in motion. The third was run over by the engine in attempting to cross the road in a wagon when the engine was approaching, and himself and horse killed.
Do.	Sampson	12	Do.	1832	Newcastle Company	4 do.	
Do.	Velocity	12	Do.	1834	West Point Company	3½ do.	
Do.	Star	8	Do.	1834	Wm. Norris	4 do.	
Do.	Eagle	20	Do.	1835	Baldwin	3 do.	
Do.	Arrow	10	Do.	1835	Newcastle Company	3 do.	
Do.	Arabian	20	Do.	1836	Baldwin	2 do.	
Do.	Reindeer	20	Do.	1837	Do.	1 do.	
Philadelphia & Reading	Neversink	25	Do.	1837	Do.	3 months	Upon the Philadelphia and Reading railroad there have been no accidents. It has been in use but a short time.
Do.	Rockett	25	Do.	1837	Braithwait, London	2 do.	
Do.	Fire-fly	25	Do.	1837	Do.	2 do.	
Do.	Spitfire	25	Do.	1837	Do.	1 do.	
Do.	Dragon	25	Do.	1837	Do.	1 do.	
Philadelphia & Trenton	Pennsylvania	14	Do.	1835	Baldwin	2½ years	Philadelphia and Trenton road. There have a number of accidents occurred upon this road, in nearly the same manner as upon the Norristown road.
Do.	New Jersey	14	Do.	1835	Do.	2½ do.	
Do.	Trenton	16	Do.	1835	Do.	2½ do.	
Do.	Black Hawk	16	Do.	1835	Do.	2½ do.	
Philadelphia & Wilmington	Wilmington	25	Do.	1836	Edward Barry	21 months	Philadelphia and Wilmington road. There have been no accidents upon this road that I have heard of.
Do.	Maryland	25	Do.	1836	Baldwin	18 do.	
Do.	Delaware	25	Do.	1836	Do.	18 do.	
Do.	Brandywine	25	Do.	1837	Do.	12 do.	
Do.	Gen. Washington	25	Do.	1837	Norris	8 do.	
Do.	Newcastle	25	Do.	1838	Newcastle Company	9 do.	
Do.	Christiana	25	Do.	1838	Baldwin	9 do.	

Philadelphia & Columbia	-	Lancaster	-	25	Do.	1834	Do. -	4 years
Do.	-	Columbia	-	25	Do.	1834	Do. -	4 do.
Do.	-	Philadelphia	-	25	Do.	1834	Do. -	4 do.
Do.	-	Pennsylvania	-	25	Do.	1834	Do. -	4 do.
Do.	-	Delaware	-	25	Do.	1834	Do. -	3½ do.
Do.	-	Susquehanna	-	25	Do.	1834	Do. -	3½ do.
Do.	-	Schuylkill	-	25	Do.	1834	Do. -	3½ do.
Do.	-	Kentucky	-	25	Do.	1835	Stephenson -	3½ do.
Do.	-	John Bull	-	20	Do.	1835	Do. -	3½ do.
Do.	-	Atlantic	-	20	Do.	1835	Do. -	3½ do.
Do.	-	Albion	-	20	Do.	1834	Baldwin -	3 do.
Do.	-	Juniatta	-	25	Do.	1834	Do. -	3 do.
Do.	-	Brandywine	-	25	Do.	1834	Do. -	3 do.
Do.	-	America	-	25	Do.	1835	Do. -	3 do.
Do.	-	Sampson	-	25	Do.	1835	Sellers & Sons -	2½ do.
Do.	-	Planet	-	30	Do.	1835	Do. -	2½ do.
Do.	-	Columbus	-	30	Do.	1835	Newcastle Company	2½ do.
Do.	-	West Chester	-	25	Do.	1836	Wm. Norris -	2 do.
Do.	-	Conestoga	-	25	Do.	1836	Baldwin -	2 do.
Do.	-	Virginia	-	25	Do.	1836	Do. -	2 do.
Do.	-	Wash'n co. Farmer		25	Do.	1836	Newcastle Company	2 do.
Do.	-	Paoli	-	25	Do.	1836	Baldwin -	18 months
Do.	-	E. F. Gay	-	25	Do.	1836	Do. -	18 do.
Do.	-	Parksburg	-	25	Do.	1836	Do. -	18 do.
Do.	-	Octorara	-	25	Do.	1836	Do. -	18 do.
Do.	-	Downingtown	-	25	Do.	1837	Do. -	18 do.
Do.	-	Piqua	-	25	Do.	1837	Do. -	15 do.
Do.	-	Telegraph	-	25	Do.	1837	Garrett & Eastwick -	15 do.
Do.	-	Indiana	-	25	Do.	1837	Baldwin -	15 do.
Do.	-	Mississippi	-	25	Do.	1837	Do. -	14 do.
Do.	-	Montgomery	-	25	Do.	1837	Do. -	14 do.
Do.	-	Wisconsin	-	25	Do.	1837	Do. -	14 do.
Do.	-	Enterprise	-	25	Do.	1837	Garrett & Eastwick	14 do.
Do.	-	Bald Eagle	-	25	Do.	1836	Do. -	22 do.
Stationary engine	on	Philadelphia plane		30	Do.	1834	Rush & Muhlenberg	4½ years
Do.	"	Columbia	do.	30	Do.	1834	Do. -	4½ do.
Do.	at	Parksburg shop	-	15	Do.	1835	Baldwin -	2½ do.

The Philadelphia and Columbia railroad has two inclined planes. I could not obtain an estimate of the value of property destroyed, which, on those planes, must always happen, by the breaking of ropes and machinery used in passing the cars. If possible, the use of inclined planes should always be avoided. The locomotives used upon this road have collapsed their flues a number of times, but without doing any damage. Accidents to paasengers have frequently occurred. In one instance, upon this road, there were three persons killed by the breaking of an axle of one of the cars, which was caused by the rapid rate at which they were then running. Other accidents have happened to persons from want of care and attention on the part of themselves and the engineers, of which I have not been able to learn the particulars.

H 9.

PHILADELPHIA, *September* 1, 1838.

DEAR SIR: I herewith enclose you a number of "*The American Railroad Journal,*" which contains a woodcut engraving of my improved locomotive engine. The improvement consists in placing two pairs of driving or propelling wheels under the *hindmost end* of the engine, and two pairs of guide wheels under the *forward end* of it. This combination of four driving wheels and four guide wheels produces the following new and beneficial results:

1st. Where increased power is required, the weight and size of the boiler and machine can be increased in a ratio of 8 to 6 over ordinary engines, and the adhesion is increased upon the rails by having two pairs of driving or propelling wheels under the *hindmost end,* instead of one pair as in the usual way.

2d. The shock produced by the engine passing over rough parts of the road is greatly relieved by having *two bearings* or *pairs* of wheels under each end, instead of *one* as heretofore.

3d. The safety, both as regards road and engine, is greatly increased by the increased strength and compactness of the machine, and by having two axles under each end of the engine, instead of one as usual.

4th. When this improvement is applied to an engine of ordinary weight, it is evident that the weight upon each wheel would be *reduced,* and that the *adhesion* and *power* of the engine would be retained. The shocks upon the road in passing rough or undulating points would be greatly reduced, as in the first proposition.

You will find in the Railroad Journal, herewith enclosed, a letter written to me by William J. Lewis, Esq., a distinguished civil engineer, setting forth the comparative advantages of my engine over that of Mr. Baldwin's, which has heretofore been considered the best in this country. Mr. Lewis has given a convenient table in which the power of the engine upon various planes, from a *dead level* to a rise of 100 feet per mile, is exhibited.

Since the date of Mr. Lewis's letter, several engines upon this plan have been constructed, and their powers tested, which prove the entire accuracy of Mr. Lewis's calculations.

You will confer a favor upon me, and subserve the object of the Government, by sending to the proper department the enclosed plans.

Yours, respectfully,

H. R. CAMPBELL.

JOHN KERN, Esq. *Deputy Collector.*

H 10.

NEW YORK, *January* 20, 1836.

DEAR SIR: I have received your statement of the dimensions of your proposed engine, and, in return, will furnish you with my estimate of its power on a level railroad, and of its ability to ascend inclined planes of greater *ration than* have heretofore been deemed practicable for locomotive *ies. It does* not require the spirit of prophecy to predict that the

effect of the improvements now making in the construction of locomotives will be the entire abolition of stationary power on railroads, and, by allowing the adoption of higher grades than have yet been resorted to, hold out inducements to the formation of roads in situations where the nature of the country has hitherto precluded their introduction.

I shall commence with an examination of the mechanical action of locomotive engines, and of the resistance to be overcome on a level railroad and on an inclined plane.

Let d=diameter of cylinders in inches.

l=length of stroke in inches.

P=pressure on cylinders per square inch.

R=whole resistance to the motion of engine and train, viz: friction of the parts of the engine, friction of the axles of the carriages composing the train, and on inclined planes the gravity of the mass in motion.

The area of the two pistons being $2d^2 \times .7854$, the force acting against them is $2 P d^2 \times .7854$; and as they move through a distance 2 l (or make two strokes) during one revolution of the driving wheels, $4 P d^2 l \times .7854$ will represent the momentum of the force which overcomes a resistance R acting at the circumference of the driving wheels during one revolution. The circumference of the driving wheel is $D \times 3.1416$, and consequently $D R \times 3.1416$ will express the momentum of the resistance overcome.

Hence, $4 P d^2 l \times .7854 = D R \times 3.1416$, or $R = \frac{d l P}{D}$.

When an engine has its greatest load, the pressure of steam in the boilers and in the cylinders will be the same. Taking P for the pressure on the safety-valve, the above equation will determine the maximum resistance an engine will overcome. That portion of the resistance arising from the friction of the engine depends much upon the excellence of its construction, but may be estimated at 5 lbs. per square inch of the area of the piston, in addition to the usual allowance for the friction of the axles in railroad carriages, viz: 10 lbs. per ton. Putting r then to express simply the resistance of the train to motion, from the joint effects of gravity and the friction of the axles, we shall have $r = \frac{d^2 l (P - 5)}{D}$

Let us now ascertain the weight an engine will carry up a plane of a given inclination.

Let W=gross weight in tons, engine inclusive.

A=ascent in feet per mile.

Then $\frac{2240 W A}{5280} = \frac{14 W A}{33}$ = Gravity of load in lbs., and $10 W$ = friction of load in lbs.

Hence whole resistance $R = \frac{14 W A}{33} + 10 W = \frac{d^2 l (P - 5)}{D}$

From which we have $W = \frac{33 R}{14 A + 330}$; also $W = \frac{33 d^2 l (P - 5)}{D (14 A + 330)}$.

Having found expressions for the *maximum* load an engine is capable of carrying, prior to entering on the subject of the velocity of the proposed

engine with given loads, or the adhesion of the engine to the rails, I shall state the dimensions of some of the parts of Mr. Baldwin's and your engines. The capabilities and actual performances of the former being well known, it will not be difficult to deduce what may be expected of the latter.

In the engines built by Mr. M. W. Baldwin:

d Diameter of cylinders, 10.5 inches.
l Length of stroke, 16 inches.
D Diameter of driving wheels, 4 feet 6 inches.
Weight of engine and water, 7½ tons.
Weight on driving wheels, 5 tons.
Traction without wheels sliding, 2,777 lbs.
Surface of boiler exposed to fire, 298 square feet.
Contents of fire-box, 22½ cubic feet.

$$\text{Hence } R=\frac{98\ P}{3},\ r=\frac{98\ (P-5)}{3}+W=\frac{1078\ (P-5)}{14\ H+330}.$$

In engine building by Mr. H. R. Campbell:

d. : Diameter of cylinders, 14 inches.
l .. Length of stroke, 16 inches.
D : Diameter of driving wheels, 4 feet 6 inches.
Weight of engine and water, about 12 tons.
Weight on driving wheels, 8 tons.
Traction without wheels sliding, 4,480 lbs.
Surface of boiler exposed to fire, 723 square feet.
Contents of fire-box, 53 cubic feet.

$$\text{Hence } R=\frac{1568\ P}{27},\ r=\frac{1568}{27}(P-5) \text{ and } W=\frac{8624\ (P-5)}{63\ A+1485}$$

It is known that M. W. Baldwin's engines can convey a gross weight (engine and tender included) of 114 tons up grades of 30 feet per mile, at a velocity of 10 miles per hour, maintaining a constant pressure on the safety-valve of ninety pounds to the square inch; and that with this load, in dry weather, no slipping of the wheels on the rails takes place. The effective pressure of steam is, as we have shown, 5 lbs. less than the pressure indicated by the safety-valve, or 20 lbs. less than its total elastic force, estimating the atmospheric pressure at 15 lbs. to the square inch. Hence using the above formula $R=\frac{98\ P}{3}$ for ascertaining the effect of a given pressure on the cylinders at the circumference of the driving wheels, we have:

Elastic force of steam (P = 105) - - -		3,430 lbs.
Resistance of atmosphere (P = 15) = -	490 lbs.	
Friction of machinery (P = 5) = -	163	
Total resistance - - - - - -		653
Traction of engine - - - - -		2,777 lbs.

The gravity and friction of 114 tons, found by the formula

$$r=\frac{14\ W\ A}{33}+10\ W \text{ is } \frac{14\times 30\times 114}{33}+1140=2591 \text{ lbs.},$$

which leaves 186 lbs. for the resistance of the engine and train on curves.

The weight on the driving wheels being 5 tons or 11,200 lbs., and the traction 2,777 lbs., we find that the traction is nearly one-fourth the insistent weight. Supposing the weight on the driving wheels of your engines to be 8 tons or 17,920 lbs.; and adopting this proportion, we have 4,480 lbs. for the limit of traction of your engine. In ascending high grades, the traction might be considerably increased by throwing part of the weight of the tender on the driving wheels. Coulomb estimates the friction of iron on iron at $\frac{1}{3.55}$ the weight. But his experiments were confined to flat surfaces; and as the amount of adhesion must decrease when the area of the adhering surface is diminished, the limit of traction above stated cannot vary far from the truth.

In engines similarly constructed, the quantity of steam generated under the same application of heat is in exact proportion to the surface of the boilers exposed to the action of the fire. But where there is a greater proportional contents of fire-box, we must suppose a greater proportional consumption of fuel, and consequently a more intense application of heat. The proportion of exposed surface in the two engines is 1 to 2.43; but the proportion of the contents of the fire-boxes is 1 to 2.80. Adding to the first ratio one-third of the difference for the more intense application of heat, I shall estimate the evaporating power of your engine at 2.55 times that of those built by M. W. Baldwin. As the elastic force of the steam varies in the direct ratio of its density, the momentum of the steam generated by the boiler, or its elastic force multiplied by its velocity of generation, will be its momentum in the cylinders, and, consequently, also its momentum at the circumference of the driving wheels. No error will, therefore, arise in referring the forces and resistances immediately at the circumference of the driving wheels, to find their effects as applied to the traction of the engine.

This method will avoid much unnecessary calculation, and enable us, at a glance, to see how every item of the account affects the general computation. The steam generated by Mr. Baldwin's engines has been shown to be capable of overcoming a resistance of 3,430 lbs. moved 10 miles an hour, or 34,300 lbs. moved one mile per hour.

Now the evaporating powers of the two engines being as 1 to 2.55, your engine will generate steam of an elastic force of $34{,}300 \times 2.55 = 87{,}465$ lbs. moved one mile per hour. The resistance from the pressure of the atmosphere and friction of machinery, amounting to 20 lbs. per square inch on the cylinders, is estimated at the circumference of the driving wheels, since $\left(R = \frac{1568\ P}{27}\right)$, $\frac{1568 \times 20}{27} = 1{,}161$ lbs. Hence we have the following rules applicable to your engine:

To find the traction, the velocity being given, divide 87,465 by the velocity, and subtract 1,161 from the quotient.

To find the velocity, the traction being given, add 1,161 to the traction, and divide 87,465 by the sum.

Assuming 450 tons as the greatest load (gross) the engine can convey on a level road, (for want of adhesion,) and estimating the friction at 10 lbs per ton, the velocity will be $15\frac{45}{100}$ miles per hour.

The following table will exhibit the traction at velocities from $15\frac{45}{100}$ to 25 miles per hour.

Velocity in miles per hour.	Traction in pounds.
$15\frac{45}{100}$	4,500
16	4,305
17	3,984
18	3,698
19	3,443
20	3,212
21	3,004
22	2,814
23	2,642
24	2,483
25	2,338

The following table shows the gross load (engine inclusive) your locomotive will carry up grades from 1 to 100 feet per mile, at a velocity of $15\frac{45}{100}$ miles per hour. A column is added which shows what weight on different ascents is equal to 100 tons on a level road, and furnishes a very convenient table of multiples for finding what load on a graded road is equivalent to a given load on a level.

Rise per mile in feet.	Load in tons.	Load=100 tons on a level.	Rise per mile in feet.	Load in tons.	Load=100 tons on a level.
level	450	100	21	238	52.89
1	432	95.93	22	233	51.72
2	415	92.18	23	228	50.61
3	400	88.71	24	223	49.55
4	385	85.49	25	218	48.53
5	371	82.50	26	214	47.55
6	359	79.71	27	210	46.61
7	347	77.10	28	206	45.71
8	336	74.66	29	202	44.84
9	326	72.37	30	198	44.00
10	316	70.21	31	194	43.19
11	307	68.18	32	191	42.42
12	298	66.26	33	188	41.67
13	290	64.45	34	184	40.94
14	282	62.74	35	181	40.24
15	275	61.11	36	178	39.57
16	268	59.57	37	175	38.92
17	261	58.10	38	172	38.28
18	255	56.70	39	170	37.67
19	249	55.37	40	167	37.08
20	243	54.10	41	164	36.50

TABLE—Continued.

Rise per mile in feet.	Load in tons.	Load=100 tons on a level.	Rise per mile in feet.	Load in tons.	Load=100 tons on a level.
42	162	35.95	72	111	24.66
43	159	35.41	73	110	24.41
44	157	34.88	74	109	24.16
45	155	34.38	75	108	23.91
46	152	33.88	76	106	23.67
47	150	33.40	77	105	23.44
48	148	32.97	78	104	23.21
49	146	32.48	79	103	22.98
50	144	32.04	80	102	22.76
51	142	31.61	81	101	22.54
52	140	31.19	82	100	22.33
53	138	30.78	83	99	22.12
54	137	30.39	84	98	21.91
55	135	30.00	85	98	21.71
56	133	29.62	86	97	21.51
57	132	29.26	87	96	21.32
58	130	28.90	88	95	21.13
59	128	28.55	89	94	20.94
60	127	28.21	90	93	20.75
61	125	27.87	91	93	20.57
62	124	27.55	92	92	20.40
63	122	27.23	93	91	20.22
64	121	26.92	94	90	20.05
65	120	26.61	95	89	19.88
66	118	26.32	96	89	19.71
67	117	26.03	97	88	19.55
68	116	25.74	98	87	19.39
69	115	25.46	99	87	19.23
70	113	25.19	100	86	19.08
71	112	24.92			

You will perceive that I differ from Wood in the theory of the action of locomotive engines, as much as I do in the practical results. He estimates the effective power of engines at 30 *per cent.* of the actual pressure of steam indicated by the safety-valve, after deducting the friction of the engine itself.

Now, in Mr. Baldwin's engines, twenty pounds at the safety-valve gives a traction of 2,940 lbs.; 30 per cent. is 882 lbs.; so that, without taking into account the friction of the engine, we should have a force sufficient to move but $88\frac{2}{10}$ tons on a level road, or $38\frac{8}{10}$ tons up a grade at 30 feet per mile.

No per-centage can be assigned, for a certain resistance is opposed to the motion of machinery, which does not depend upon the pressure of steam. Not a word is said on the subject of the resistance of the atmosphere, although a large amount of steam is always consumed in overcoming this resistance; (p. 368) "The proper load for an engine upon a level, is 9 or 11 times its weight, as the case may be;" that is, the engine will carry this weight, and no more, without the wheels sliding. The wheels of Baldwin's engines, then, should slide when the load exceeded 82½ tons on a level road, or 36$\frac{3}{16}$ tons on a grade of 30 feet per mile! I have adopted his statement of the friction of cars, which he estimates at 10 lbs. per ton. I think it will be found too great, but I have no accounts of any experiments to enable me to make the proper correction.

Yours, respectfully,

WM. J. LEWIS.

HENRY R. CAMPBELL, Esq.

H 11.

COLLECTOR'S OFFICE,

Philadelphia, September 8, 1838.

SIR: I received your favor of the 6th instant, respecting the resolution of the House of Representatives of the 29th of June, and your circular of the 12th of July last; and beg leave to say, that on the 23d of July, with the approbation of the surveyor of the port, three inspectors of the customs were selected and detailed for the purpose of collecting all the information within their power. The return of Mr. C. F. Hyneman, of the number of locomotive engines used, together with a number of the "American Railroad Journal," and a letter and a drawing of Mr. Campbell's improved locomotive engine, is herewith enclosed.

The return of steam-engines used in steamboats is in progress, and will be transmitted during the ensuing week.

The return of steam-engines used in factories, &c., will not be ready so early. The number in use in the city and county of Philadelphia, as far as ascertained, amounts to 117.

I am, very respectfully, your obedient servant,

JOHN KERN,

Deputy Collector.

Hon. LEVI WOODBURY,

Secretary of the Treasury.

H 12.

COLLECTOR'S OFFICE,

Port of Philadelphia, November 15, 1838.

SIR: The final returns of steam-engines are herewith enclosed. On the 1st September last, a return of 61 engines was forwarded, which, with those now sent, containing 58, makes a total of 119.

Of the engines used in manufactories, 4 in number will be found in the present abstract, which added to 217 contained in abstracts transmitted in returns on the 11th of September and 25th of October last, give a total of 221.

The return of steamboats was transmitted on the 17th of October last.

The horse-power given in the abstract of locomotives now forwarded, in use on the Harrisburg, Portsmouth, Mount Joy, and Lancaster railroads, and those on the Cumberland-valley railroad, may not be correct. I am promised a return from the engineer, which, when received, will be forwarded to you; in the mean time it was thought best to send the returns as they are.

I am, sir, very respectfully, your obedient servant,

JOHN KERN,
Deputy Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

H 13.

Return of steam-engines in use in the district of Philadelphia, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
								Y'rs.
Schuylkill county	Pottsville and Danville Railroad Co., (stationary engine.)	P. and D. railroad company	6	Raising cars over the inclined plane.	High	1831	Built in Baltimore	7
Columbia county	Pottsville and Danville Railroad Co.	Same - -	5	Repairing locomotive-engines.	High	1838	Haywood & Snyder.	
Lancaster county	Lancaster, Mountjoy, Portsmouth, and Harrisburg Railroad Company depot.	Lancaster, Mountjoy, Portsmouth, and Harrisburg railroad company.	4	Turning lathes, &c. -	High	1836	M. W. Baldwin -	2
Columbia county	Grist-mill - - - -	(Unknown.) Information received in a letter.	15	Manufacturing flour -	High	1829	Built in Pittsburg	9

COLLECTOR'S OFFICE, *Port of Philadelphia, November* 15, 1838.

JOHN KERN, *Deputy Collector.*

Return of steam-engines used on railroads in the district of Philadelphia; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Harrisburg, Portsm'th, Mountjoy, and Lancaster.	Middletown	18	High	Sept. 1836	M. W. Baldwin, Philad.	These engines have been in use generally since their construc'on; the Middletown & Conewago have performed the principal work.	
	Mountjoy	18	do.	Nov. 1836	Do.		
	Flying Dutchman	18	do.	Dec. 1836	Do.		
	Harrisburg	18	do.	Jan. 1837	Do.		
	C. B. Penrose	18	do.	July 1837	Do.		
	Conewago	18	do.	May 1837	Do.		
	Henry Clay	18	do.	Oct. 1838	Wm. Norris, Philad.		
Cumberland Valley, (from Harrisburg to Chambersburg.)	Cumberl'd Valley	24	do.	Aug. 1837	Wm. Norris, Philad.	In use since constructed.	
	Carlisle	24	do.	Nov. 1837	Do.		
	Chambersburg	24	do.	Nov. 1837	M. W. Baldwin, Philad.		
	Shippensburg	24	do.	Feb. 1838	Wm. Norris, Philad.		
	Nicholas Biddle	24	do.	Feb. 1838	Do.		
Danville and Pottsville	North Star	18	do.	June 1838	Garrett and Eastwick, Philadelphia.	Three months	This engine is used to carry coal from the Shamokin mines to Sunbury; uses anthracite coal as fuel; carries about 40 cars, containing 100 tons of coal at a load.
Williamsport and Elmira.	Robert Ralston	18	do.	1838	Wm. Norris, Philad.	Forwarded from Philad. in Oct.	
Hazelton Coal comp.	Lehigh	18	do.	1838	Garrett & Eastwick, do.		
	Hazelton	26	do.	1838	Do.		

H 14—Continued.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Beaver Meadow	Beaver	26	–	1837	Garrett & Eastwick, Philad.	1 year.	
	S. D. Ingham	18	–	1836	Do. do.	2 "	
	Elias Eley	18	–	1836	Do. do.	2½ "	
	Quakake	18	–	1836	Do. do.	2 "	
	Nonpareil	26	–	1838	Do. do.	3 months.	
Alleghany Portage,* (from Holidaysburg to Johnstown.)	Boston	15	High	1832	Bolton and Co., Boston	4 years	These engines have *inside* connexions, and *short* pitmans, producing much friction. *Iron truck frames—an improvement.*
	Mountaineer	15	do.	1834	McClung, Wade, & Co., Pittsb'g	4 "	
	Delaware	15	do.	1833	E. A. Young, Newcastle, Eng.	4 "	
	Alleghany	17	do.	1834	Do. do.	3 "	
	Pittsburg	15	do.	1834	McClung, Wade, & Co., Pittsb'g.	3 "	
	Backwoodsman	17	do.	1836	Do. do.	2 "	
	Conemaugh	17	do.	1836	Do. do.	2 "	
	Benj. Franklin	15	do.	1835	Long and Norris, Philadelphia	3 "	
	Robert Morris	15	do.	1836	William Norris, Philadelphia	2½ "	
	Geo. Washington	20	do.	1836	Do. do.	2½ "	
	James Madison	20	do.	1836	Do. do.	2 "	These engines require not more than half the fuel and oil required by other engines performing the same amount of work; easily managed, and requiring few repairs; performances unequalled on this road. Improvements are *outside* connexions, *long* pitman, with wrist *outside* of drivers.
	Bush Hill	25	do.	1837	Do. do.	1 y'r & 9 ms.	
	Independence	25	do.	1837	Do. do.	Do.	
	Constitution	25	do.	1837	Do. do.	Do.	
	United States	25	do.	1837	Do. do.	Do.	
	Lafayette	20	do.	1837	Do. do.	Do.	
	Comet	15	do.	1837	E. A. Young, Newcastle, Eng.	1 year	*Inside* connexions; well constructed; performances tolerable.

*On the Alleghany Portage railroad there are 20 stationary engines, (all high pressure,) of which 9 are of 30-horse power each, equal to 270; 6 of 25-horse power each, equal to 150; 4 of 20-horse power each, equal to 80; and 1 of 40-horse power; making a total of 500-horse power—one-half of which is in constant use.

COLLECTOR'S OFFICE, *Philadelphia, November* 15, 1838.

JOHN KERN, *Deputy Collector.*

H 15.

COLLECTOR'S OFFICE,
District of Presque Isle, September 8, 1838.

SIR: Enclosed you will receive my return of steam-engines used in steamboats in the district of Presque Isle; also, of steam-engines in use, exclusive of those used in steamboats. There being no steam-engines used on railroads in this district, I have not forwarded a blank return; and no accidents having taken place in steam-engines in this district, I have not been enabled, from the information obtained, to notice any improvements in the construction of steam-engines or steamboats, or legislative enactments on the subject.

Very respectfully, sir, your obedient servant,

EDWIN J. KELSO, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

H 16.

Return respecting steam-engines used in steamboats in the district of Presque Isle; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons. 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where and when built.	By whom built.
William Peacock -	On lake Erie -	120 00	102 feet -	19 feet -	7 feet 6 inch.	Portland, New York, 1829 -	Standard.
Thomas Jefferson -	Do. -	428 68	174 do. -	26 do. 8 inch.	9 do. 8 do.	Erie, Pennsylvania, 1834 -	S. Jenkins.
Erie - -	Do. -	497 22	176 do. -	27 do. 5 do.	10 do. 10 do.	Erie, Pennsylvania, 1837 -	M. Creamer.

H 16—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
C. M. Reed & others -	John Spires -	J. Jones -	50	High -	M. Stackhouse -	1826	11 years.
Do. -	Thomas Wilkins -	Sanderson -	150	Low -	Allaire - -	1834	3 do. 3 mth's
J. S. Colt & others -	T. J. Titus. -	Clemons -	250	Low -	T. Halloway - -	1837	3 months.

COLLECTOR'S OFFICE;
District and port of Presque Isle, September 8, 1838.

EDWIN J. KELSO, *Collector.*

a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Erie, Penn.	Erie furnace	Johnson & Sennett	7	Smelting ore	High	1834	Culver & Dickison	4 years	No accidents.
Do.	Cascade mill	P. C. Blanken	25	Planing & sawing	Do.	1838	Robinson & Minis	7 days	Do.
Do.	Tannery	Samuel Hays	7	Grinding bark, &c.	Do.	1836	Culver & Dickison	2 years	Do.

COLLECTOR'S OFFICE,
District and port of Presque Isle, September 8, 1838.

EDWIN J. KELSO, *Collector.*

H

Return respecting steam-engines used in steamboats in the district of Secretary of the Treasury, to enable him to comply with a

Name of boat, and where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
		ft. in.	ft. in.	ft. in.			
Arabian, Pittsb'g to Louisville	97 28	122 8	17 0	4 10	Pittsburg	1834	Phillips
Amity, do -	25 73	73 4	12 0	2 7	Bridgeport	1834	A. Mason
Canton, do -	102 81	129 4	18 2	5 0	Pittsburg	1834	Hopkins
Wellsville, do -	43 40	95 0	17 9	2 9	Brownsville	1835	A. Mason
Hunter, do -	104 61	125 5	19 6	5 8	Pittsburg	1834	Do
Washington, do -	139 78	132 10	19 4	5 8	Bridgeport	1834	Hopkins
Detroit, do -	136 71	136 8	18 10	5 6	Pittsburg	1835	A. Mason
Mountaineer, do -	162 54	130 6	22 0	6 0	Bridgeport	1833	Kimber
R. Putnam, do -	98 00	127 7	16 2	4 11	Marietta	1835	Whitney
Flora, do -	118 75	133 0	18 6	5 0	Pittsburg	1835	Stevens
Newcastle, do -	40 79	92 8	15 8	3 0	Do	1834	A. Mason
Huntress, do -	97 39	122 7	16 5	5 0	Do	1834	Do
Waccusta, do -	98 05	126 6	18 0	4 6	Steubenville	1834	Murray
Hero, do -	89 69	116 3	16 11	4 9	Bridgeport	1834	Kimber
Tempest, do -	105 63	124 8	18 6	5 2	Pittsburg	1835	Stevens
Dayton, do -	111 34	125 11	17 9	5 2	Do	1835	A. Mason
Algonquin, Pittsb'g, Orleans, Louisville.	221 70	160 8	21 8	6 7	Do	1835	Do
Pioneer, do -	112 23	135 5	17 8	4 10	Do	1835	Do
Oswego, do -	117 33	132 10	17 4	5 3	Do	1835	A. Aplegate
Sandusky, do -	111 60	136 0	16 10	5 6	Do	1835	A. Mason
Delaware, do -	106 18	136 0	16 10	5 0	Do	1835	Do
Visiter, do -	100 21	125 0	17 2	4 10	Brownsville	1836	Hopkins
R. Morris, do -	123 40	144 6	17 6	5 0	Pittsburg	1835	Frisbee
Salem, do -	106 53	125 3	18 4	5 10	Do	1836	A. Aplegate
Tremont, do -	112 80	138 0	17 0	5 0	Do	1836	A. Mason
Kentucky, do -	90 22	139 0	16 6	4 6	Do	1836	A. Aplegate
S. Packet, do -	45 45	100 0	16 0	3 0	Do	1836	Shouse
Coquette, do -	90 36	124 6	16 0	4 8	Do	1836	A. Aplegate
Tennessee, do -	86 58	130 0	17 0	4 5	Bridgeport	1836	Hopkins
Wabash, do -	43 91	79 0	16 0	3 0	Fredericktown	1836	Prinkle
N. Lisbon, do -	54 06	116 0	16 0	3 0	Pittsburg	1836	A. Mason
Lilly, do -	82 48	120 0	17 0	4 2	Do	1836	A. Aplegate
Troy, do -	120 30	137 0	18 0	5 0	Do	1836	Noble
Rochester, do -	92 76	128 0	19 0	4 0	Do	1836	A. Aplegate
Eutaw, do -	51 70	102 0	15 0	3 6	Brownsville	1836	Whitney
Brighton, do -	93 58	132 0	17 0	4 8	Pittsburg	1836	A. Mason
Loyal Hannah, do -	76 76	124 0	16 0	4 0	Do	1836	Do
Pavilion, do -	83 43	119 6	17 6	4 6	Do	1836	A. Aplegate
W. Wirt, do -	110 00	127 0	19 0	5 0	Marietta	1836	Hamilton
Roanoke, do -	99 86	127 8	17 4	4 8	Grave creek	1835	Shouse
Masaillon, do -	96 14	129 0	17 0	4 6	Pittsburg	1836	A. Mason
Casket, do -	90 39	126 0	17 0	4 6	Do	1836	Shouse
·ont, do -	158 76	150 0	19 0	5 9	Do	1836	A. Mason
our, do -	113 47	125 0	17 6	5 6	Portsmouth	1835	-
do -	88 73	122 7	17 4	4 4	Wheeling	1835	Shouse

urg, (Penn.;) prepared in pursuance of instructions from the ion of the House of Representatives of June 29, 1838.

of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
l Grant -	William Forsyth	Brickle	65	high	Arthurs & Co.	1834	4 y'rs.
ven -	J. T. Hugo	J. Day	16	do	–	1834	4 "
h and Co.	J. P. Dennis	–	72	do	Arthurs & Co.	1834	4 "
ser & Co.	A. Murdock	T. Neal	20	do	Do	1835	3 "
ies & Co.	S. Stone	Martin	73	do	Do	1834	4 "
r and Co.	G. W. Pannell	Lytle	117	do	–	1834	4 "
t Line -	W. McClintock	Phillips	115	do	Arthurs & Co.	1835	3 "
-	J. H. Sterrett	–	125	do	–	1833	5 "
t -	J. H. Bayley	–	62	do	–	1835	3 "
Davis -	R. D. Chapman	–	80	do	Minis & Robinson	1835	3 "
& Co. .	William Ward	–	18	do	Warden & Benny	1834	4 "
z -	S. Johnson	–	65	do	S. & Thompson	1834	4 "
and Co.	J. A. Dohrman	W. Baker	62	do	–	1834	4 "
r and Co.	Jos. Manner	–	55	do	–	1834	4 "
binson &	R. Baldwin	–	74	do	Minis & Robinson	1835	3 "
es & Co.	D. H. Stone	–	78	do	Arthurs & Co.	1835	3 "
-	C. Cadwalader	Brickle	150	do	Do	1835	3 "
-	R. Crawford	Shaw	78	do	Do	1835	3 "
is & Co.	John H. Sterrett	Sterrett	79	do	Stackhouse & T.	1835	3 "
ke & Co.	Francis Dohrman	A. O'Neal	78	do	Arthurs & Co.	1835	3 "
-	H. Price	–	74	do	Do	1835	3 "
nt Co. -	A. Mason	Prinkle	63	do	–	1836	2 "
& Co.	William Baird	Jacobs	83	do	Minis & Robinson	1835	3 "
. Cocke	J. B. Forde	Carmack	74	do	Arthurs & Co.	1836	2 "
son&Co.	M. E. Lucas	McCully	78	do	Do	1836	2 "
nt Co. -	Jesse Gray	Speer	70	do	–	1836	2 "
and Co.	Jos. Filson	Myers	22	do	Warden & Benny	1836	2 "
nt Co. -	T. P. Fennell	James	70	do	Stackhouse & T.	1836	2 "
& Co. -	B. Kimber	Cochran	54	do	Do	1836	2 "
& Co. -	James C. Pitts	Cox	21	do	Warden & Benny	1836	2 "
Co. -	H. Smith	Patton	25	do	Arthurs & Co.	1836	2 "
in & Co.	Thos. G. Moore	McArthur	52	do	Do	1836	2 "
rt & Co.	S. Johnson	Williams	81	do	Do	1836	2 "
& Co. -	D. Blashford	Smith	71	do	Do	1836	2 "
& Co.	Sam'l Sedgwick	Roberts	23	do	Smith and Irwin	1836	2 "
Co. -	Robert Gettey	Nixon	71	do	Do	1836	2 "
Co. -	Charles Stone	Smart	51	do	Warden & Benny	1836	2 "
r. & Co.	Thos. Baldwin	Groves	52	do	Arthurs and Co.	1836	2 "
Comp.	D. Blashford	Henry	78	do	Bemis	1836	2 "
-	S. Mason	Thompson	70	do	Do	1835	3 "
ton &Co.	John Day	Frampton	69	do	Arthurs and Co.	1836	2 "
Comp.	J. Blashford	McNeal	70	do	S. and Thompson	1836	2 "
-	J R. Smithers	Fulton	125	do	Do	1836	2 "
n -	Thos. Hamilton	Staily	79	do	–	1835	3 "
ks -	Augustus Dana	Pratt	54	do	–	1835	3 "

H 1

Name of boat, and where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By wh built.
		ft. in.	ft. in.	ft. in.			
Columbian, Pitt'g to Louisv'e	125 93	138 0	17 0	5 6	Pittsburg	1836	A. Mason
Niagara, do -	125 20	141 0	18 0	5 3	Do	1836	Hopkins
Ontario, do -	133 75	149 0	18 5	5 6	Do	1836	Noble
Camden, do -	103 55	133 0	16 3	4 10	Do	1836	A. Mason
Florida, do -	109 85	126 0	18 0	5 0	Do	1836	Stewart
London, do -	125 05	140 0	18 0	5 0	Do	1836	A. Mason
Liberty, do -	83 53	135 0	18 0	5 0	Brownsville	1837	Hopkins
Philadelphia, do -	102 13	130 0	17 5	4 8	Wheeling	1835	Do
P. Henry, do -	93 00	128 0	17 0	4 6	Cincinnati	1836	-
Robert Emmett, do -	103 70	130 8	17 3	4 9	Wheeling	1835	-
Fallston, Pittsburg, Beaver, Louisville.	48 81	100 0	17 0	3 0	Fallston	1837	A. Apleg
Ariel, do -	95 60	125 0	17 6	4 6	Pittsburg	1837	-
Shannon, do -	77 40	114 0	15 6	4 5	Brownsville	1837	Hopkins
Buffalo, do -	115 30	130 0	18 6	5 0	Pittsburg	1837	A. Mason
Fayette, do -	112 70	136 0	17 0	5 0	Brownsville	1837	Hopkins
Beaver, Pittsburg & Beaver	51 62	109 0	16 6	3 0	Pittsburg	1837	A. Mason
Savannah, do -	137 54	150 0	19 0	4 4	Do	1836	Do
Pennsylvanian, do -	323 58	165 7	23 8	8 7	Do	1836	Do
Warren, do -	80 40	107 0	16 0	4 6	Brownsville	1836	Hopkins
Le Roy, do -	83 19	110 0	16 0	5 0	Do	1836	Do
Newark, do -	88 51	134 0	16 4	4 6	Pittsburg	1836	A. Apleg
Havana, do -	138 65	151 0	18 6	4 6	Do	1836	A. Mason
Science, do -	59 67	108 1	14 3	4 0	Fredericktown	1834	Hopkins
Girard, do -	139 60	140 0	18 6	5 6	Pittsburg	1836	Owens
Hark Away, do -	91 47	124 0	18 0	4 3	Do	1836	A. Apleg
Paris, do -	131 25	150 0	18 0	5 0	Do	1837	A. Mason
Georgia, do -	135 65	150 0	18 6	5 0	Do	1837	Do
Asia, do -	261 98	170 0	21 0	7 6	Do	1837	Owen
Dolphin, do -	156 38	154 0	19 6	5 10	Do	1837	A. Apleg
Avalanche, do -	143 22	151 0	17 6	5 6	Do	1837	Do
John Mills, do -	223 45	165 0	21 6	6 6	Marietta	1837	Whitney
Itasca, do -	80 00	110 0	19 0	4 0	Do	1837	Hamilton
Albany, do -	158 20	153 0	20 0	5 6	Pittsburg	1837	A. Mason
Othello, do -	85 56	116 0	17 6	4 4	Brownsville	1837	Walker
Liverpool, do -	51 00	105 0	17 0	3 0	Liverpool	1837	Coffin
Chilicothe, do -	253 32	160 0	25 6	6 6	Pittsburg	1837	A. Apleg
Embassy, do -	144 92	147 0	18 6	5 6	Brownsville	1837	Hopkins
Maryland, do -	120 25	138 0	18 0	5 0	Pittsburg	1837	A. Apleg
Favorite, do -	188 20	144 0	19 0	6 0	Do	1837	James Ki
Rodney, do -	99 24	116 0	19 0	4 6	Do	1837	Shouse
Pennsylvania, do -	134 00	144 0	19 0	5 0	Do	1837	A. Mason
Victoria, do -	85 56	123 0	16 0	4 6	Brownsville	1837	Hopkins
Merrimack, do -	88 73	170 0	25 0	6 0	Pittsburg	1837	Stevens
Reporter, do -	134 88	141 0	17 6	5 6	Steubenville	1836	Shouse
Oronoko, do -	367 68	173 0	26 0	9 0	Pittsburg	1837	A. Apleg
Norfolk, do -	219 33	164 0	23 0	6 0	Do	1838	Do
Maine, do -	145 35	146 0	18 6	5 0	Do	1838	A. Mason
Tiber, do -	207 72	167 0	21 6	6 0	Do	1836	Do
Tribune, do -	220 76	165 0	23 0	6 6	Do	1838	Do

ued.

of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
rke & Co.	A. S. A. Dunn	O'Neal	84	High	Arthurs and Co.	1836	2 yr's.
nt Comp.	Elisha Bennett	Prinker	84	do	–	1836	2 "
o -	Thos. S. McKee	Speer	111	do	Warden and Benny	1836	2 "
e Comp.	D. Frampton	–	72	do	S. and Thompson	1836	2 "
Stewart -	John T. Dunn	–	76	do	–	1836	2 "
Grant -	James Patterson	Williams	84	do	Arthurs and Co.	1836	2 "
r & Co.	Samuel Gasskill	Gasskill	52	do	–	1837	1 "
nt Comp.	T. H. Rodgers	Murray	72	do	–	1835	3 "
& Kelly	Hiram Kountz	–	70	do	–	1836	2 "
Comp.	S. Mason	Fullerton	72	do	–	1835	3 "
B. Co.	Jos. Conrad	–	23	do	Arthurs and Co.	1837	1 "
& Co. -	G. McNeal	–	71	do	S. and Thompson	1837	1 "
bell & Co.	J. Parkinson	R. McCarron	49	do	–	1837	1 "
eer & Co.	T. G. Moore	McLean	80	do	Arthurs and Co.	1837	1 "
ller & Co.	James Martin	Hartman	78	do	–	1837	1 "
ser & Co.	Jacob Poe	A. Morris	23	do	Do	1837	1 "
	S. B. Page	Wallace	116	do	Do	1836	2 "
& Benny	John Biggart	Lee	220	do	W. and Benny	1836	2 "
ser & Co.	James Johnston	–	50	do	–	1836	2 "
& Co.	J. Woodward	–	52	do	–	1836	2 "
jr., & Co.	W. M. Carlisle	–	54	do	Arthurs and Co.	1836	2 "
rke & Co.	W. Keating	–	117	do	Do	1836	2 "
rger -	John Massey	–	25	do	–	1834	4 "
ks & Co.	W. Johnston	–	117	do	S. and Thompson	1836	2 "
h & Co.	Camp. Wallace	–	70	do	M. and Robinson	1836	2 "
Grant -	H. Javens	French	110	do	Arthurs and Co.	1837	2 "
-	H. Leonard	Morgan	115	do	S. and Thompson	1837	1 "
ore -	M. W. Jenks	–	170	do	W. and Benny	1837	1 "
nt line -	Joseph Irwin	–	124	do	Smith and Minis	1837	1 "
ng -	Stephen Johnson	–	119	do	Minis and Robinson	1837	1 "
art & Co.	Charles Boswith	J. Johnson	151	do	–	1837	1 "
Davis -	George Evans	–	50	do	–	1837	1 "
r & Co.	Samuel Brickell	J. Brickell	125	do	–	1837	1 "
Valker -	E. G. Maguire	–	55	do	–	1837	1 "
Vallace &	Richard Huston	–	23	do	–	1837	1 "
n & Co.	W. M. Carlisle	–	122	do	Minis and Robinson	1837	1 "
dgers -	Robert Rodgers	–	119	do	–	1837	1 "
nt line -	A. G. Mason	Smith	81	do	–	1837	1 "
Stewart -	A. Lothrop	–	135	do	–	1837	1 "
d -	Z. Packard	–	75	do	–	1837	1 "
ke & Co.	S. Stone	Thomas	115	do	Arthurs and Co.	1837	1 "
wden -	John Snowden	–	53	do	–	1837	1 "
Robinson	John Burt	–	54	do	Minis and Robinson	1837	1 "
-	H. Caldwell	McNeal	115	do	–	1836	2 "
vart -	George Young	Green	240	do	–	1837	1 "
ith & Co.	John Smith, jr.	–	148	do	–	1838	6 m's.
ke & Co.	R. Crawford	J. Davis	120	do	Arthurs and Co.	1838	8 "
-	Abm. Nicholson	–	139	do	W. and Benny	1838	8 "
-	James Boyd	–	150	do	Do	1838	8

Name of boat and where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
		ft. in.	ft. in.	ft. in.			
Brownsville, Pittb'g to Beaver	79 75	120 0	15 6	4 6	Pittsburg	1838	Hopkins
Holstein, do -	105 00	117 0	19 0	5 0	Do	1838	Stephens
Empire, do -	132 24	139 0	18 0	5 6	Brownsville	1838	Owens
C. J. Marshall, do -	178 39	137 0	21 2	6 5	Wheeling	1832	A. Mason
Princeton, do -	111 30	122 0	17 6	5 6	Cincinnati	1836	Shouse
Plowman, do -	38 66	85 11	12 10	3 8	Bridgeport	1833	Do
Susquehanna, do -	138 56	148 0	19 0	5 4	Pittsburg	1837	A. Mason
Corinthian, Pittsb'g to Orleans	296 55	176 0	25 0	7 0	Do	1837	–
De Kalb, Pittsb'g to Louisville	125 60	130 0	17 6	5 6	Liverpool	1836	Coffin
Thames, do -	136 02	144 0	18 0	5 6	Brownsville	1838	–
Express, do -	192 30	157 0	23 0	5 6	Do	1838	–
Lady of Lake, Pittsburg to Pontchartrain.	285 50	170 0	25 0	7 0	Pittsburg	1838	–
Trident, Pitts'g to Louisville	70 76	130 0	19 0	3 0	Do	1838	–
Zanesville, do -	83 00	95 0	19 0	5 0	Point Harmar	1838	–
Rhine, do -	118 00	130 0	19 0	5 0	Freedom	1838	–
Julia Gratiot, do -	45 09	100 0	17 0	3 0	Pittsburg	1837	–
Oconee, do -	115 27	130 0	18 0	5 9	Do	1838	–
Daisey, do -	68 08	110 0	15 0	4 4	Do	1838	Owens
Traveller, tow-boat -	38 35	90 0	15 0	3 0	Do	1836	Frisbee
Ranger, tow-boat - -	27 33	80 0	15 0	3 0	Do	1836	Do
P. Miller, Pittsb'g to Louisv'e	153 93	120 0	23 0	6 0	Do	1838	A. Aplegate
Dry dock, No. 1, Pittsburg	–	–	–	–	Do	1834	Walker
Dry dock, No. 2, Pittsburg	–	–	–	–	Do	1837	Do
Virginia - - -	116 05	136 0	17 6	5 0	Do	1837	–

ıued.

of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
Copeland	Wilson Smith	–	50	High	–	1838	8 m's.
Vann -	W. B. French	–	73	do	Minis and Robinson	1838	8 "
. Kimber -	G. W. Pennell	–	114	do	–	1838	8 "
ewart -	William Henry	–	145	do	–	1832	6 y'rs.
Miner -	H. Baldwin	–	78	do	–	1836	2 "
Cox -	John Cox	–	18	do	–	1833	5 "
eer & Co.	J. C. Wylie	–	117	do	Arthurs and Co.	1837	1 "
rodes -	Wm. Srodes	–	217	do	Warden & Benny	1837	1 "
ddbert -	G. P. Lemman	–	84	do	Do	1836	2 "
ingle -	A. G. Mason	Eickbaum	116	do	Stackhouse and Co.	1838	1 m'h.
ıer -	D. Campbell	–	160	do	W. and Benny	1838	1 "
hannen -	Hart Darrah	–	214	do	–	1838	1 "
ıer -	Saml. Helvering	–	47	do	Litch and Co.	1838	2 "
Vhite -	Robt. Legett	–	51	do	Do	1838	2 "
Phillips -	C. B. King	–	80	do	Phillips	1838	3 "
States -	Saml. Clarke	Millinger	22	do	–	1837	1 y'r.
Harris -	J. M. Harris	Baker	78	do	Warden & Benny	1838	3 m's.
arigle -	Jas. McGarigle	Jas. Fluming	45	do	–	1838	9 "
Fawcett -	John Fawcett	John Fawcett	40	do	Smith and Irwin	1836	2 y'rs.
osky -	P. McLoskey	McCartney	37	do	Do	1836	2 "
&Anderson	R. R. Frisbee	N. S. Cisson	120	do	Stackhouse and Co.	1838	1 m'h.
rwin & Co.	–	St. Clair	10	do	Do	1834	4 y'rs.
Do -	–	Do	20	do	Do	1837	1 "
Boggs -	J. D. Davis	–	–	do	–	1837	1 y'r & 5 m's.

TSBURG, *November* 28, 1838.

JOHN CLARK, *Surveyor, &c.*

H 16.

Return respecting steam-engines used in steamboats in the district of Presque Isle; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons. 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where and when built.	By whom built.
William Peacock -	On lake Erie -	120 00	102 feet -	19 feet -	7 feet 6 inch.	Portland, New York, 1829 -	Standard.
Thomas Jefferson -	Do. -	428 68	174 do. -	26 do. 8 inch.	9 do. 8 do.	Erie, Pennsylvania, 1834 -	S. Jenkins.
Erie - -	Do. -	497 22	176 do. -	27 do. 5 do.	10 do. 10 do.	Erie, Pennsylvania, 1837 -	M. Creamer.

H 16—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
C. M. Reed & others -	John Spires -	J. Jones -	50	High -	M. Stackhouse -	1826	11 years.
Do. -	Thomas Wilkins -	Sanderson -	150	Low -	Allaire - -	1834	3 do. 3 mth's
J. S. Colt & others -	T. J. Titus. -	Clemons -	250	Low -	T. Halloway - -	1837	3 months.

COLLECTOR'S OFFICE;
District and port of Presque Isle, September 8, 1838.

EDWIN J. KELSO, *Collector.*

Return of all the steam-engines in use in the district of Presque Isle, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Erie, Penn.	Erie furnace	Johnson & Sennett	7	Smelting ore	High	1834	Culver & Dickison	4 years	No accidents.
Do.	Cascade mill	P. C. Blanken	25	Planing & sawing	Do.	1838	Robinson & Minis	7 days	Do.
Do.	Tannery	Samuel Hays	7	Grinding bark, &c.	Do.	1836	Culver & Dickison	2 years	Do.

COLLECTOR'S OFFICE,
District and port of Presque Isle, September 8, 1838.

EDWIN J. KELSO, *Collector.*

H 19.

PITTSBURG, *November* 28, 1838.

SIR: I herewith enclose a list of engines located in the district of Pittsburg, as far as I have been able to collect them. There are, no doubt, a number more yet in the district, but they are so scattered through the country that it is impossible to arrive at the whole number. A great many of the manufacturers have left this place, and the owners and places of location of many engines have been changed; hence the difficulty in finding them. The railroad engines and locomotives are given as far as I have been able to collect them. The names of engineers are not all given; those on land, with but few exceptions, have no steady engineer employed, and could not give any name; those on steamboats are changing every trip, which makes it equally difficult to name any particular one.

No accidents have happened in this district, within my knowledge, except to the Beaver and Eutaw,* and Arbuckle's cotton factory, by bursting boilers; and within a few weeks a powder-mill was blown up, but whether the engine was the cause I have not been able to learn. I believe no lives were lost.

I have just been told there were two persons killed at Arbuckle's factory.

I have the honor to be, very respectfully, your obedient servant,

JOHN CLARK, *Surveyor.*

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington city.

* No lives were lost by the accidents on board these boats.

Return of all steam-engines in use in the district of Pittsburg, State of Pennsylvania, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Penn & Water streets	Point steam mill	John Davis & Co.	15	Grist and cracker	High	1830	William Johnston	8 years.
Point street	Point engine shop	Litch, Sinamon, & Co.	11	Manufacturing engines	High	1836	Litch, Sinamon, & Co.	2½ years.
Point and Penn streets	Planing and stave saw	Lippencott & White	16	Planing and kegg	High	1831	F. A. Beemis & Co.	
Penn & Dequesney "	Fulton	M. Stackhouse	9	Manufacturing engines	High	1838	M. Stackhouse	2 months.
Penn street	Point saw mill	Thomas Wickersham	80	Sawing and wire-draw	High	1830	F. A. Beemis & Co.	8 years.
Marberry street	– –	John B. Bell & Co.	25	Planing machine	High	1837	John Arthurs & Co.	1 year and 6 mo.
Pitt street	Brewery	George Shiras	5	Brewing	High	1835	Freeman & Miller	3 y'rs and 3 mo.
Penn st. & Sicle's al'y	– –	Smith, Boyer, & Co.	70	Rolling and nailing	High	1812	John Arthurs & Co.	26 y's & 10 mo.*
Sicle's alley and river	Water-works	City of Pittsburg	120	Forcing city water	High	1833	Stackhouse, Tumbleson, & Co.	5 y'rs and 5 mo.
Do.	Do.	Do.	80	Do.	High	1828	Arthurs, Warden, & Benny.	10 years.
Penn street	Lead factory	Avery & Ogden	10	Grinding white lead	High	1832	Smith & Co.	6 years.
Maine street	Pennsyl'ia rolling mill	Miltenberger, Brown, & Co.	180	Rolling iron	High	1827	John Arthurs & Co.	
Do.	Do.	Do. do.	80	Manufacturing nails	High	1835	McClurg, Wade, & Co.	
Do.	– –	Warner & Co.	10	Planing boards	High	1833		
Liberty street	Pittsburg brewery	Brown, Verner, & Smith	4	Brewing	High	1830	F. A. Beemis & Co.	8 years.
Do.	– –	Robert Wightman	4	Engine shop	High	1837		
Washington street	– –	Standish Pepard	25	Manufacturing flour	High	1838	McClurg, Wade, & Co.	1 month.†
O'Hara and Etna sts.	– –	McClurg, Wade, & Co.	30	Manuf. steam-engines	High	1836	Do. do.	2 years.
Do.	Cupola furnace	W. T. McClurg & Co.	20	Blast furnace	High	1838	Do. do.	2 months.
Do.	Cannon foundry	McClurg, Wade, & Co.	25	Boring cannon	High	1820	Mahlon Bodgert	18 months.
Etna street	Lippencott mills	Kings, Higby, & Anderson	100	Rolling iron	High	1828	Stackhouse & Co.	10 years.‡

* Cylinder renewed in 1826. † James Taylor, engineer. ‡ Thomas Girtz, engineer.

H 16.

Return respecting steam-engines used in steamboats in the district of Presque Isle; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons. 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where and when built.	By whom built.
William Peacock -	On lake Erie -	120 00	102 feet -	19 feet -	7 feet 6 inch.	Portland, New York, 1829 -	Standard.
Thomas Jefferson -	Do. -	428 68	174 do. -	26 do. 8 inch.	9 do. 8 do.	Erie, Pennsylvania, 1834 -	S. Jenkins.
Erie - -	Do. -	497 22	176 do. -	27 do. 5 do.	10 do. 10 do.	Erie, Pennsylvania, 1837 -	M. Creamer.

H 16—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
C. M. Reed & others -	John Spires -	J. Jones -	50	High -	M. Stackhouse -	1826	11 years.
Do. -	Thomas Wilkins -	Sanderson -	150	Low -	Allaire - -	1834	3 do. 3 mth's
J. S. Colt & others -	T. J. Titus. -	Clemons -	250	Low -	T. Halloway - -	1837	3 months.

COLLECTOR'S OFFICE;
District and port of Presque Isle, September 8, 1838.

EDWIN J. KELSO, *Collector.*

Return of all the steam-engines in use in the district of Presque Isle, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Erie, Penn.	Erie furnace	Johnson & Sennett	7	Smelting ore	High	1834	Culver & Dickison	4 years	No accidents.
Do.	Cascade mill	P. C. Blanken	25	Planing & sawing	Do.	1838	Robinson & Minis	7 days	Do.
Do.	Tannery	Samuel Hays	7	Grinding bark, &c.	Do.	1836	Culver & Dickison	2 years	Do.

COLLECTOR'S OFFICE,
District and port of Presque Isle, September 8, 1838.

EDWIN J. KELSO, *Collector.*

DELAWARE.

I 1.

COLLECTOR'S OFFICE,

Wilmington, (Delaware,) October 4, 1838.

SIR: In pursuance of instructions contained in your circular dated July 12, 1838, requesting me to adopt such measures as I might deem best calculated to obtain the information asked for in a resolution of the House of Representatives, passed on the 29th June, 1838, as to the use of steamboats in the United States, and the accidents and loss of life and property which have attended their use, and to reply to the respective inquiries as soon as practicable: in compliance with the above requisition, I took the necessary steps immediately upon the receipt of your circular, and obtained the following statements and information, which I now have the honor to report.

The information called for under the 1st and 8th branches of the said resolution, so far as I have been able to obtain the same, accompanies this report, and is numbered from 1 to 6, inclusive.

The information called for under the 2d, 3d, 4th, 5th, 6th, and 7th branches of said resolution, intended to embrace accidents, &c., happening in this district, I have not noticed in this report; no accident or matter connected therewith having occurred to make a notice necessary, and to which we are doubtless in a great measure indebted to a judicious selection of officers, and an untiring vigilance on the part of competent engineers.

Under the 9th head, I may reply, that having but little pretensions myself to that kind of mechanical knowledge involved in this branch of the said resolution, I applied to an experienced machinist of this place for his views on the subject, and obtained from him some brief remarks, which are herewith transmitted. (See paper A.)

You will also find, in letter form, some information from William W. Young, Esq., treasurer of the Wilmington steamboat, herewith transmitted. (See paper B.)

Very respectfully, I remain your obedient servant,

HENRY WHITELEY, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington City.

I 2. (B.)

PHILADELPHIA, *September* 14, 1838.

DEAR SIR: In compliance with your circular of the 22d August, which only came to hand this week, I beg leave to submit the answers *seriatim* to the several queries embraced by Mr. Sergeant's resolution in the House Representatives, June 29, 1838, at least so far as the subject may have come more immediately under the writer's notice.

Query 1st. See tabular statement.

Query 2d. The present company may be said to have been in operation since 1815, during which period there were some changes of ownership; up to the present time no explosion has ever taken place, nor has any injury been sustained by any one, either in life or limb. In fact, no important derangement of the machinery has occurred, except in one instance, and that confined exclusively to the machinery, not necessarily connected with steam as a moving power, and might have occurred under the operation of animal or water, as well as of steam power.

Queries 3d, 4th, and 5th. The undersigned, confining himself to that which has come immediately under his supervision for the answers to these queries, must refer to the preceding answer, and also to the tabular statement.

Query 6th. No rations of intoxicating liquors are served out to the hands; the master and proprietors discountenancing the custom, as far as practicable.

Queries 7th and 8th. See tabular statement.

Query 9th. The steamboat Wilmington was launched in 1829; in 1835 was completely rebuilt and lengthened; the very best materials were used; all the straight timbers, and elsewhere, wherever practicable, were live-oak and red cedar; not a speck of suspicious timber or plank was left; and at this date is considered, for all practical purposes, as good as the first year after she was launched. This season her engine has been enlarged, say some 50 per cent.; the boilers completely overhauled, and their capacity adapted to the increased demand of the engine. The cylinder of the original engine was 38 inches in diameter, 7½ feet stroke; it is now 40½ inches in diameter, and 10 feet stroke. So far as my judgment goes, there has been no improvement since the days of James Watt to be compared with what is called the balance-valve, in larger engines lessening the power requisite to move this part of the machinery from 4 to 6 horses; this improvement is to be seen in all the swift boats on our river.

Yours, respectfully,

WILLIAM W. YOUNG,

Treasurer Wilmington and Philad. Steamboat Co.

H. WHITELEY, Esq., *Collector.*

I 3.

Return of steam-engines used on the Newcastle and Frenchtown railroad, in the district of Delaware; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives, passed June 29, A. D. 1838.

No. of engines.	Name of railroad.	Name of locomotive.	Weight of engine.	Horse power.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
			Tn's					
1	Newcastle & Frenchtown -	1. Delaware -	8	38	High pressure -	1831	Robt. Stephenson, of Newcastle-upon-Tyne	Since Aug., 1832, but not in constant use.
2	The corporate name of the	2. Pennsylvania	9	40	Do. -	1832		Since Nov., 1832. Not in constant use.
3	company is "The New-	3. Virginia -	9	40	Do. -	1833		Since Aug., 1833. Not in constant use.
4	castle and Frenchtown	4. Phœnix -	8	38	Do. -	1832		Since Feb., 1833. Not in constant use.
5	Turnpike and Railroad	5. Newcastle -	9	40	Do. -	1834	Constructed at Newcastle, in the workshops of the company.	Since May, 1834. Not in constant use.
6	Company."	6. Comet -	8	38	Do. -	1835		Has been but little used, and was first put in use soon after she was constructed.

REMARKS.

The weight of the above-mentioned engines is given, because the power of a locomotive engine cannot be estimated by, or assimilated to, a horse power; although that expression may be applicable to a stationary engine.

No disasters or accidents have attended the use of these engines, by which there has been any injury to a human being, or loss of property. The only accidents have been the breaking of crank-axles, or derangement of some part of the machinery; and these have generally occurred when the engines were going at a slow rate.

JAMES BOOTH, *President of said Company.*

NEWCASTLE, (DEL.), *September* 21, 1838.

I 4. (A)

SEPTEMBER, 1838.

DEAR SIR: In compliance with your request for information on the subject of steam-engines, as contained in the resolutions of Mr. Sergeant, of the House of Representatives, I can briefly state that the first eight questions relate principally to steamboats now in operation within this district, and cannot be answered properly but by persons connected with them; but to the ninth question, asking for information on the subject generally, I will briefly respond.

The ordinary low-pressure, or Bolton and Watt engines, now in common use in boats on the waters of the Middle and Eastern States, are liable to some objections. They can be kept safely in operation only by an exercise of the greatest care and the most constant vigilance on the part of their commanders. That those objections can be entirely obviated, I have no expectation; but that they may be materially decreased, I have no doubt. One, and perhaps the most material, difficulty in engines of the present day, is the uncertain supply of water to the boilers. This supply is generally furnished by a small forcing-pump attached to the engine, usually under the direction of the fireman, and occasionally inspected by the engineer. It will sometimes occur, when the pump is working, that owing to some defect or derangement of the valves, the boiler does not receive its proper supply of water; and in the event of the flues becoming bare, an explosion is very likely to ensue. Another source of accident is the high pressure of steam used by many of our boats that are termed low-pressure, and using the Bolton and Watt engine, many of them carrying the steam as high as twenty, and some as high as twenty-five pounds to the square inch; and that, too, in boilers of large dimensions. I do not undertake to say that large boilers may not be worked with comparative safety at that pressure; but the most untiring vigilance must be used under those circumstances, to guard against accident; a decrease of water, so as to leave the flues of the boiler bare for a few minutes only, would, in all probability, cause a collapse of the flues, or possibly an explosion of the boiler.

To obviate the difficulty, in some measure, of the precarious supply of water to the boiler, some few engines have a glass tube inserted in the fire end of the boiler, one end above, and the other below the water line. Having a free communication for steam and water through it, by which the height of water is always plainly visible, it will at all times indicate with positive certainty the quantity of water the boiler contains; and, in the event of the pump not doing duty, the fact could be immediately discovered, and the proper remedy applied. If the top of the flues were legibly marked on the outside of the boiler, the above-mentioned glass water-gauge, and also the ordinary mercurial steam-gauge, placed where they could be distinctly seen by the passengers, it would, no doubt, add much to the general security, as it would rarely occur that there would not be one or more of the passengers who were perfectly conversant with the operations of the engine: the engineer would not know how many of the passengers were as well acquainted with the operations of the engine as himself, and, having the gauges before them, could judge as correctly. That circumstance alone would have a tendency to make him careful.

With respect to the high-pressure engines used on the Southern and Western waters, by which so much loss of life has been sustained, the undersigned can see no adequate remedy. He is, however, of the opinion that some additional security might be afforded, by not permitting a direct water communication between the boilers, (which are frequently six or eight in number.) When the boat approaches a landing-place, the passengers usually collect on the side of the boat next the landing, which frequently careens her very much. In that case, the water flows from the boilers on the high side to those on the low one; and as the fires are usually kept up, the boilers on the high side having lost a considerable portion of their water, frequently become red hot; and on the boat's starting and assuming her regular position, the water again flows back on the iron. Thus extraordinarily heated, which produces steam with great rapidity, a boiler must be of great strength indeed to sustain such an almost instantaneous accumulation of steam. The repeated instances of explosions almost immediately on or after leaving the landing-place, are but too certain evidences of the truth of this theory. To obviate this difficulty, a separate forcing-pump might be used for each boiler, or a separate pipe of communication from the pump to each boiler, instead of pumping into a main pipe by which all the boilers are connected, as is the present practice.

The objection to using the low-pressure engine on the Mississippi river and some of its tributaries, has been the large quantity of muddy water they are obliged to pass through the engine, to the great injury of the boilers, and also the foot and channel valves. This difficulty has lately been removed, by the invention of a new condenser, by Mr. Samuel Hall, of Basford, England. By this invention, a low-pressure engine may be run for an indefinite length of time on pure distilled water. The steamship Sirius is on this plan, and has made four successive voyages across the Atlantic, without the use of salt water in her boilers. The British admiralty have also a number of boats in their employ with this kind of machinery. The unerring certainty with which the boilers are supplied by this plan, and the total absence of any deposite of salt or mud in them, furnish a degree of security that I believe is not attained by any other known means.

Yours, very respectfully,

MAHLON BETTS.

Col. HENRY WHITELEY,
Collector, Delaware district.

Return respecting steam-engines used in steamboats enrolled at Newcastle, in the district of Delaware; prepared pursuant to instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			feet.	feet in.	feet in.											
Salem.	Delaware and Schuylkill rivers.	121 85	95	21 9	6 6	Baltimore, Md.	1830	James Beacham, Baltimore, Md.	Newcastle and Frenchtown R. R. Company.	William Trout.	William Trout.	30	Low	Watchman and Bratt.	1830	Eight years.

REMARKS.

This boat has been constantly employed ever since she was built; has never experienced an accident of any kind, either in engine or boiler, which is in a great measure attributable to *sobriety* and *watchfulness* on the part of the *captain, engineers, and firemen.* No boiler can be made proof against carelessness, and the frequent use of intoxicating drinks; indeed, I fear the latter is a raging epidemic in our land, which has caused the loss of many valuable lives, and much property, and, until entirely abolished from our steamboats and locomotives, may cause much more.

ROBERT H. BARR,
Agent Newcastle and Frenchtown R. R. at Newcastle.

of stationary steam-engine in use by the Newcastle Manufacturing Company, at Newcastle, in the district of ware; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply a resolution of the House of Representatives, passed June 29th, A. D. 1838.

Name of place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Newcastle, Delaware	Newcastle Foundry, and Locomotive Engine Manufactory.	Newcastle Manufacturing Company.	12	Driving the machinery of the foundry and factory.	High	1835	Levi Morris and Co.	3 y'rs.

REMARKS.

No accident has occurred to the engine above mentioned, and, with proper care and attention, never will occur.

ANDREW C. GRAY,
President Newcastle Manufacturing Company.

SEPTEMBER 19, 1838.

Return of steam-engines used on and belonging to the Wilmington section of the Philadelphia, Wilmington, and Baltimore Railroad, in the district of Delaware; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

No. of engines.	Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
1	Philadelphia, Wilmington, and Baltimore Railroad.	Susquehanna	25	High	November 7, 1836	Proprietr's Locks & Canal company, Lowell, Mass.	22 months.
2	Do. do.	Wilmington	25	High	May, 1837	E. Bury, Liverpool, England	13 do.
3	Do. do.	Maryland	25	High	November, 1836	M. W. Baldwin, Philadelphia	22 do.
4	Do. do.	Delaware	25	High	November, 1836	Do. do.	22 do.
5	Do. do.	Brandywine	25	High	August, 1837	Do. do.	12 do.
6	Do. do.	Christiana	25	High	January, 1838	Do. do.	8 do.
7	Do. do.	General Washington	25	High	December, 1837	William Norris	9 do.
8	Do. do.	Newcastle, Del.	25	High	July, 1838	Newcastle Manufact'ng Company, Newcastle, Del.	1 do.

JAMES ELLIOTT, *Superintendent.*

Return respecting steam-engines used in steamboats enrolled at Wilmington, in the district of Delaware; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at broadest part.	Depth from spardeck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			Ft.	F.in.	F.in.											Y'rs.
New Jersey	Betw'n Wilmington and N. Jersey.	95 19	75	19 9	7 3	Philadelphia.	1829	S. Grice -	Wilmington and N. Jersey steamboat co.; incorporated by State of Delaware.	J. Cling -	J. Anderson	23	Low	T. Halloway	1829	9
Wilmington	Betw. Philadelphia and Wilmington.	278 41	156	22 6	8 3	Philadelphia.	1829	S. Grice -	J. A. Bayard, J. Torbert, E. Hillis.	F. Black	J. Waples	Ab't 120	Low	T. Halloway	1829	9
						Rebuilt at Philad.	1835	J. Vaughan	Wm. W. Young, A. Dupont, John Gordon, L. Pusey, & J. Young.	–	–	–	Low	Reconstructed and enlarged.	1838	3

REMARKS.—In answer to interrogatories Nos. 2, 3, 4, 5, 6, 7, none.

JOHN BULLOCK,
President Wilmington and N. J. Steamboat Company

Return of all the steam-engines in use in the district of Delaware, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Wilmington -	Wilmington iron foundry	Betts & Stotsenburg -	6	Blowing bellows -	Low	May, 1836	Mahlon Betts -	2 years.
Do. -	- - - -	Betts, Pusey, & Harlan	5	Turning iron, &c. -	High	-	M. W. Baldwin.	
Do. -	- - - -	Bonney & Bush -	10	Blowing bellows and turning.	High	April, 1836	Garrett & Eastwick, and Charles Bush.	2 years.
Do. -	Iron works - -	Radcliffe Chadwick -	10	Turning iron -	High	June, 1837	Bonney & Bush -	1 year.
Do. -	Edenpark mills - -	J. P. Garesche -	10	Driving powder mills	High	Dec. 1836	Bonney & Bush -	1 year.
Do. -	Do. - -	Do. - -	6	Do. do. -	High	1831	McClary & Bush -	7 years.
Do. -	Do. - -	Do. - -	10	Do. do. -	Low	Unk'n; purchased second-hand.	Prosper Martin -	13 years.
Do. -	- - - -	Alrichs & Son -	6	Manufac. machinery	High	1832	Alrichs & Son -	About 5 y'rs.
Do. -	Phœnix foundry -	James Rice - -	5	Melting iron -	High	1835	Bush & McClary -	About 3 y'rs.
Do. -	- - - -	Caleb Stroud -	8	Grinding plaster and grain.	High	1837	Betts, Pusey, & Harlan	1 year.

Doc. No. 211

MARYLAND.

K 1.

DISTRICT AND PORT OF ST. MARY'S, (MD.,)
October 12, 1838.

SIR: In answer to the supplemental circular from the Treasury Department dated the 1st of October, I have the honor to state, that there is no steamboat registered at this office, nor has any accident occurred within my district from the bursting of steamboat boilers.

I am, very respectfully, your obedient servant,
JAMES W. ROACH, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

K 2.

BALTIMORE CUSTOM-HOUSE,
September 7, 1838.

SIR: Accompanying this, you will receive the report of Leonard Kernan, the special agent appointed by me to obtain the information required by the circular from your Department of the 12th July last. I believe it to be in every respect as accurate and full as the extensive character of the inquiry will permit. The duties of my office here rendered it entirely impossible that I should give my personal attention to it, other than superintending and directing the inquiry.

I am, very respectfully, sir, your obedient servant,
WM. FRICK, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of steam-engines used on railroads in the district of Baltimore; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pres.	When con-struct'd	By whom constructed.	How long in use.
Philadelphia, Wilmington, and Baltimore Railroad Co.	Matthew Newkirk	–	High	1837	Wm. Norris, Philad.	10 months.
	Nicholas Biddle	–	High	1837	Do.	10 months.
	Lady Washington	15 to 20	High	1837	Do.	10 months.
	Napoleon		High	1837	Do.	10 months.
	Baltimore	–	High	1837	Do.	10 months.
	Lewis Brantz	–	High	1837	Do.	10 months.
Baltimore and Ohio Railroad Co.	Arabia	–	High	1834	Phineas Davis	4 years.
	George Washington	–	High	1834	Do.	4 years.
	John Adams	–	High	1835	Do.	3 years.
	Thomas Jefferson	–	High	1835	Do.	3 years.
	James Madison	–	High	1835	Do.	3 years.
	James Monroe	–	High	1835	Do.	3 years.
	John Q. Adams	–	High	1836	Gillingham & Winans	2 years.
	Andrew Jackson	–	High	1836	Do.	2 years.
	John Hancock	12 to 15	High	1836	Do.	2 years.
	Phineas Davis		High	1836	Do.	2 years.
	George Clinton	–	High	1836	Do.	2 years.
	Martin Van Buren	–	High	1836	Do.	2 years.
	Benjamin Franklin	–	High	1837	Do.	1 year.
	William Patterson	–	High	1837	Do.	1 year.
	Lafayette	–	High	1837	Wm. Norris, Philad.	1 year.
	J. W. Patterson	–	High	1837	Do.	1 year.
	Philip E. Thomas	–	High	1837	Do.	1 year.
	Isaac McKim	–	High	1838	Gillingham & Winans	4 months.
Baltimore and Susquehanna Railroad Co.	Maryland	–	High	1837	Proprietors of locks and canals, Lowell, Massachusetts.	
	Baltimore	–	High	1837		
	Susquehanna	–	High	1837		
	Howard	15 to 20	High	1837		
	Herald	–	High	1832	R. Stephenson & Co., England	6 years.
	No. 151	–	High	1837		Not in use.
	No. 152	–	High	1837		Not in use.

K

Return respecting steam-engines used in steamboats in the district of of the Treasury, to enable him to comply with a resolu

Names of boats.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
			ft. in.	ft. in.	ft. in.			
Alabama -	Chesap'ke bay	676 64	209 8	24 7	13 5	Baltimore	1837	L. H. Dunkin
Columbus* -	Do	542 50	174 0	30 10	10 9	Do	1829	Geo. Gardner
Kentucky -	Do	448 82	198 6	25 6	9 4	Do	1832	Wm. Skinner
Virginia -	Do	323 09	158 6	25 10	8 9	Do	1818	W. Flanigain
Pocohontas* -	Do	428 40	138 6	30 10	11 0	Do	1829	Jas. Beacham
G. Washington	Do	343 13	165 0	24 0	9 0	Philadelphia	1830	John Vaughan
Constitution -	Do	428 19	184 5	25 0	9 6	Do	1835	Do
Gov. Wolcott	Do	152 56	104 6	22 2	7 2	New York	1825	†
Maryland -	Do	336 42	145 9	26 0	9 6	Baltimore	1818	W. Flanigain
N rfolk* -	Do	222 18	132 0	25 0	7 8	Norfolk	1818	—— Hunter
Rappahannock	Do	301 80	133 0	26 2	9 4	Baltimore	1830	John A. Robb
Fredericksburg	Do	250 58	158 0	22 6	8 6	Gosport, Va.	1827	—— Lambell
Patuxent -	Do	265 12	144 9	24 9	7 10	Baltimore	1827	A. Flanigain
Relief -	Do	277 00	132 0	25 0	9 0	Do	1833	Jas. Beacham
Susquehanna	Susquehanna river.	450 00	150 0	32 0	12 0	Do	1837	Wells and Ritcher.
Georgia -	Atlantic -	551 09	194 0	24 0	12 2	Do	1836	John A Robb
S. Carolina -	Do	466 13	170 0	23 0	12 2	Do	1835	Do
Eagle‡ -	Chesap'ke bay	261 49	180 5	29 8	9 2	Philadelphia	1813	†

* Not used. † Not known.

‡ Exploded April 18, 1824; two killed, by scalding. The explosion not accounted for. The Eagle is said to have been an old and patched-up boat. The accident occurred in the bay, below

LEONARD KERNAN, *Special ag't,*
under instruction from William Frick, Collector.

4.

Baltimore; prepared in pursuance of instructions from the Secretary tion of the House of Representatives of June 29, 1838.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
							Years.
– –	Thos. Sutton	John Johnson	167	Low	Chas. Reeder	1837	1
Maryland & Virginia steampacket co.	–	–	90	"	Do	1829	9
	James Holmes	Wm. Shaffer	130	"	Watchman &	1832	6
	Lewis Parrish	W. Kingsnorth	80	"	Do [Bratt.	1818	20
– –	–	–	90	"	Chas. Reeder	1829	9
Newcastle & Frenchtown turnpike and railroad company.	J. E. Trippe	John White	140	"	T. Holloway	1830	8
	Jas. Chaytor	Jacob Vickers	140	"	Do	1835	3
W. Owens, W. McDonald & Son, and Edmd. Lynch and others.	Richard Kenny	John Watson	35	"	Do	1825	13
W. McDonald, E. Lynch, and others.	L. G. Taylor	D. H. McCullough.	70	"	Watchman & Bratt.	1836	2
W. Owen, W. McDonald, and others	–	Alex. Watson	60	"	Chas. Reeder	1818	20
Balt. and Rappahannock steampacket comp.	Noah Fairbank	D. Leffler	75	"	Watchman & Bratt.	1830	8
Georgetown, Washingt'n, and Alexandria, steampacket company.	Geo. Guxyther	M. Rhudolph	36	"	Do	1827	14
Watchman and Bratt, C. Nichols, & G. Weems.	Geo. Weems	Joshua Smith	60	"	Do	1827	11
Corporat'n city Baltimore, and others.	J. D. Turner	J. Kesterson	150	high	Do	1835	3
Philad., Wilmington, & Baltimore R. R. comp.	Wm. Virden	Spavin	100	low	Do	1836	2
Atlantic steamboat company.	Wm. Rollins	Jacob Zigler	167	"	Chas. Reeder	1836	2
	James Coffey	Wm. Shaffer	120	"	Watchman & Bratt.	1835	3
J. Harwood, G. Weems, and others.	Geo. Weems	†	†	†	†	†	†

North Point. The names of the officers and crew not now remembered. It is not believed that intoxicating liquors were used on board, among the crew. W. F.

DISTRICT AND PORT OF BALTIMORE,
Collector's Office, Sept. 7, 1838.

WM. FRICK,
Collector.

K 5.

Return of all the steam-engines in use in the district of Baltimore, ex
suance of instructions from the Secretary of the Treasury, to enable

Place.	Name of mill or manufactory.	Names of owners.	Power of en. in horses.	For what purpose used.
Baltimore city	Canton saw mill	Canton Co. of Baltim'e	50	Sawing timber
	Canton iron works	H. Abbott and Co.	20	Driving machinery
	Do.	Do.	10	Do.
	Do.	Do.	10	Do.
	Mount Clare depot	Balt'e & Ohio R. R. Co.	6	Do.
	Gillingham foundry	Gillingham	4	Do.
	Iron and brass foundry	Joseph Share and Sons	8	Blowing bellows
	Iron foundry	James Lyon	4	Do.
	Machine factory	Vermillion and Grace	3	Driving machinery
	Oil factory	G. W. Wait	30	Making oil & mustard
	Steam-engine factory	Wells, Miller, & Clark	8	Driving machinery
		Godfrey, Meyer, & Co.	8	Thompsonian botanic medicines
	Engine factory	Mayger & Washington	4	Driving machinery
	Iron foundry	Wells, Miller, & Clark	8	Blowing bellows
	Calico factory	Samuel McClellan	8	Printing calico
	Do.	Do.	12	Do.
	Bazaar	Jacob Daley	4	Cutting glass
	Cotton factory	Walter Crook, jr.	8	Driving machinery
	Machine factory	John Rodgers	4	Do.
	Snuff mill	Snuff company	20	Grinding snuff
	Howard factory	Appold and Heald	18	Grinding bark
	Plaster mill	Edward Kenly	18	Grinding plaster Paris
	Dyewood and drug mill	R. G. Baker	20	Grinding dye-wood & drugs
	Woollen factory	William Knox	8	Spinning and carding
	Saratoga brewery	J. and J. Medtart	10	Grinding malt
	Machine factory	Alexander Paul	6	Driving machinery
	Iron foundry	G. R. Leffler	6	Blowing bellows
	Engine factory	Watchman and Bratt	25	Driving machinery
	Do.	Charles Reeder	10	Do.
	Flooring-board factory	Joseph Turner, jr.	20	Planing plank
	Valona copper works	Estate of Isaac McKim	60	Rolling copper
	Phœnix establishment	E. Larrabee	4	Grinding Thompsonian medicines.
	Oak hill tan-yard	James W. Jenkins	6	Grinding bark
Baltimore county	Huntington tan-yard	Mark W. Jenkins	6	Do.
Baltimore city	Plaster Paris mill	John B. Fry	4	Grinding plaster Paris
	Cotton factory	John Glenn	36	Carding and spinning
	Plaster Paris mill	Wynn and Co.	6	Grinding plaster Paris
	Sewellsville	Thomas Sewell	6	Grinding bark
	Lanville cotton factory	Hugh W. Evans	36	Spinning and carding
	Horn's tannery	Benjamin Horn	6	Grinding bark
	Card factory	John H. Haskell	2	Driving machinery
	Edge-tool factory	S. Willard	4	Grinding edge tools
	Carpet factory	C. G. Conradt	6	Spinning and weaving
	Washington brewery	Samuel Lucas	6	Grinding malt
	Clagett's brewery	Eli Clagett	6	Do.
	Steam saw mill	Parsons and Stow	12	Saw'g mahogany, &c.
	Do.	John Needles	4	Do.

LEONARD KERNAN,
Special agent, under instructions from Wm. Frick, collector.

K 5.

clusive of those used in steamboats and on railroads; prepared in pur-him to comply with a resolution of the House of Reps. of June 29, 1838.

High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
High -	1825	– – –	2 years -	Constructed in N. Y.
do -	1829	George Johnson - -	8 "	
do -	1829	Do. - -	8 "	
do -	1829	Do. - -	8 "	
do -	1834	Charles Reeder - -	2 "	
do -	1837	Gillingham and Winans -	6 months.	
do -	1818	Watchman and Bratt -	3 years.	
do -	1830	– – –	8 " -	Constructed in Pitts'g.
do -	1830	– – -	7 " -	Constructed in N. Y.
do -	1835	G. W. Wait - -	2 "	
do -	1837	Wells, Miller, and Clark -	1 "	
do -	1835	John Wells - -	3 "	
do -	1835	Mayger and Washington -	3 "	
do -	1831	John Wells - -	7 "	
do -	1836	Do. - -	2 "	
do -	1830	Charles Reeder - -	8 "	
do -	1832	John Wells - -	6 "	
do -	1822	John P. Strepell - -	15 "	
do -	1834	Wm. Guynn - -	4 "	
do -	1832	John Wells - -	6 "	
do -	1834	Do. - -	4 "	
Low -	1815	George Coxen - -	20 "	
High -	1834	John Wells - -	4 "	
do -	1836	Do. - -	2 "	
do -	1836	Watchman and Bratt -	2 "	
do -	1834	Do. -	4 "	
do -	1837	John Wells - -	1 "	
do -	1836	Watchman and Bratt -	2 "	
do -	1834	Charles Reeder - -	4 "	
do -	1832	Do. - -	6 "	
Low -	1818	Bolton & Watt, England	20 "	
High -	1833	John Wells - -	5 "	
do -	1831	Watchman and Bratt -	7 "	
do -	1829	Do. -	9 "	
do -	1826	John Wells - -	12 "	
do -	1824	Watchman and Bratt -	14 "	
do -	1835	– – –	3 " -	Not known.
do -	1834	John Wells - -	4 "	
do -	1828	Watchman and Bratt -	10 "	
do -	1837	Do. -	1 "	
do -	1832	George C. Johnson -	6 "	
do -	1836	Watchman and Bratt -	2 "	
do -	1832	Do. -	6 "	
do -	1833	Do. -	5 "	
do -	1832	Do. -	6 "	
do -	1828	Charles Reeder - -	10 "	
do -	1834	John Wells - -	4 "	

COLLECTOR'S OFFICE,
District and port of Baltimore, September 7, 1838.
WM. FRICK, Collector.

K 6.

Return of steam-engines in use in the district of Oxford, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	Remarks.
Easton point -	None in particular.	Joseph Niel, the principal or greatest owner.	15	Grinding wheat; some corn.	I do not know	2 or 3 years ago.	I do not know	This mill manufactures flour.
St. Michael's -	Called a steam-mill.	Saml. Harrison's estate	Not used for some time.	Not run for two years.	I believe it is low.	Many years ago.	Saml. Harrison.	This mill is quite out of use, until repaired.

There is no steamboat or railroad belongs in this district. The steamboat Maryland has run here many years, and I never heard of any accident happening on board of her. She was built in Baltimore, and is licensed in Annapolis. She passes this place generally four times a week, and I am often on board of her; but she has been clearer of accidents than any boat of her age in the United States.

As to the steam-mills, I have made the best inquiry I could, but it is hard to get every question about them correct.

I am, sir, with the greatest respect, your most obedient humble servant,

JOHN WILLIS, *Collector*

COLLECTOR'S OFFICE, *District of Oxford, July* 30, 1838.

HON. LEVI WOODBURY, Esq.

Doc. No. 21.

K 7.

CUSTOM-HOUSE,
Annapolis, October 6, 1838.

SIR: I have the pleasure to transmit, enclosed, the return relative to steamboats and steam-engines which belong in this district, and beg leave to state that there have no accidents occurred to any of these engines within this district; and that I have no knowledge of any improvements in these vessels or their machinery.

I would respectfully suggest the propriety relative to a passage of an act of Congress to regulate the speed of steamboats upon the waters of the United States, and to make it a heavy penalty upon the owners and masters of those vessels whose boats are propelled more than such a number of miles per hour, and that their speed be regulated in proportion to the power of such machinery. I am inclined to believe, by the passage of such a law, it will prevent those disastrous occurrences in those vessels which of late have been so frequent.

I am, respectfully, your obedient servant,

RICHARD SANDS, *Collector.*

HON. LEVI WOODBURY,
Secretary of the Treasury,
Washington City, D. C.

Doc. No. 21.

Return respecting steam-engines used in steamboats in the district of Annapolis, (Md.;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Name of master or commander.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			ft. in.	*feet.*	*ft, in.*											
Maryland	Between Annapolis, Easton, and Baltimore.	336 42	145 6	26	9 6	Baltimore.	1819	W. Flannegan.	A. C. Magruder, (pres't of a company,) & others.	Lemuel G. Taylor.	Duncan McCulloch.	75	Low	Watchman & Bratt.	1831	7 y'rs

Return of all the steam-engines in use in the district of Annapolis, (Md.) exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Annapolis -	Jones's mill - -	Richard J. Jones -	20	Flour and plaster -	High -	1833	Watchman & Bratt -	6 years.
Annapolis -	Hughes's mill -	Jeremiah Hughes -	20	Flour and plaster -	High -	1817	Oliver Evans -	16 years.

NOTE.—There are no locomotives in this district.

K 9.

BALTIMORE CUSTOM-HOUSE,
September 26, 1838.

SIR: Enclosed is a supplementary return of steamboat accidents that have occurred in this district, which were not known to me at the time of making my original report; which I beg may be considered as part of said report.

I am, very respectfully, your obedient servant,
WM. FRICK, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Report of steam-engines used in the district of Baltimore, supplementary to a report made to the Secretary of the Treasury on the 7th September last, pursuant to a resolution of Congress, made on the 29th June, 1838.

Name of boat.	Where employed.	Tonnage.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	When engine constructed.	How long in use.
Susquehanna*	Susquehanna river	–	–	1825	–	–	Cornwell	C. Maynard	–	Low	–	Not quite a year.
Experiment†	Patapsco river	55	Baltimore	1829	Wm. Skinner	Gen. Ridgely	Vaughn	J. P. Struffle	8	Low	1829	Not quite a year.

* Exploded the 3d of May, 1826, in ascending the Susquehanna river, and three persons killed; among them, the engineer. She was a small boat; tonnage not known, nor any other particulars, except as above stated.

† Exploded in 1829, at the mouth of Gunpowder river, and two persons killed. The above is all that can now be ascertained about her.

BALTIMORE DISTRICT, *September* 26, 1838.

WILLIAM FRICK, *Collector.*

Doc. No. 21.

K 11.

DISTRICT AND PORT OF VIENNA,

November 2, 1838.

SIR: In reply to the supplemental circular of the 1st of October last, I have to state that there are no steamboats of any description belonging to this port of entry, nor are there any locomotive engines in the district. There are four steam-engines employed in steam-mills in different parts of the district, to the proprietors of which I have applied for the necessary information to make my return. Two of the proprietors have complied with my request; the other two have made no answers to my inquiries, their motive for which I am at a loss to account for. I have written to them again, urging the necessity of an immediate reply, and hope to be able in a few days to be prepared to forward the information required.

I am, sir, very respectfully, your obedient servant,

CHAS. LEARY, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of all the steam-engines in use in the district of Vienna, Maryland, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Vienna - - -	- - - -	Thomas Byrn -	12	Sawing and grinding -	High	1836	Watchman & Bratt -	2 years.
Somerset county, Maryland -	- - - -	Beacham Deworth -	6	Sawing - -	High	1837	Watchman & Bratt -	15 months.
Cambridge - - -	Cambridge mill -	Ross & Vane -	10	Sawing, grinding, &c.	High	1836	John Wells - -	2½ years.
Wetipquin creek, Somerset co.	Wetipquin - -	John J. Dashiell -	12	Sawing, grinding, &c.	High	1837	Vermillion & Grace -	1 year.

NOTE.—No accidents have occurred in any of these mills by collapses or otherwise.

COLLECTOR'S OFFICE, *Vienna, November 22*, 1838.

CHARLES LEARY, *Collector.*

Doc. No. 21.

K 13.

COLLECTOR'S OFFICE, *Snow-hill, August* 11, 1838.

SIR: Herewith, enclosed, you will receive, from this office, the return required by the circular of the 12th July last. I must add that there are no steam-engines used, in boats or on railroads, in this district.

Respectfully, I am, sir, your obedient servant,

GEORGE HUDSON.

Hon. LEVI WOODBURY.

K 14.

Return of all the steam-engines in use in the district of Snow-hill, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
								Years.	
Somerset county -	-	John S. Zeiber	Six -	Grinding and sawing	High -	-	Sutton & Bloomer	3	
Somerset county -	-	J. J. Dashiell -	Twelve -	Grinding and sawing	High -	-	Vermillion & Grace	1	

COLLECTOR'S OFFICE, *Snow-hill, August* 11, 1838.

GEORGE HUDSON, *Collector.*

Doc. No. 21.

VIRGINIA.

L 1.

WHEELING, *October* 24, 1838.

SIR: In reply to your circular of the 12th July, 1838, respecting steamboats, &c., I have to state that I have endeavored, with a good deal of diligence, to get the information required, but without much success. The little I have got, I will briefly state.

There has but one boiler burst in this district for the last ten or twelve years. The steamboat Tricolor, in 1829, while lying at our wharf, and about to put out, and was in the act of starting, burst one of her boilers, by which ten or twelve persons were killed, drowned, or so badly scalded that they soon after died. The boilers of the boat were good, and the accident was attributable to a want of sufficient water in the boilers. The steam was kept up very high for some time before the boat attempted to start. She had exhausted her water, and then burst.

Another boat, (name not now recollected,) some four years since, collapsed one of her flues about 40 miles below this place; some three or four persons scalded, but not badly.

There are about thirty engines in operation on land in this place and its immediate vicinity, but no accident is known to have happened to any of them. They are always conducted by temperate engineers, which is not often the case in regard to boats.

Your obedient servant,

T. P. NORTON.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Secretary of the Treasury, to enable him to comply with a

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.		Breadth at the broadest part.		Depth from deck to keel.		Where built.	When built.	By whom built.
			Ft.	in.	Ft.	in.	Ft.	in.			
Pulaski -	Ohio river and Western waters.	44 10	119	0	15	0	2	8	Pittsburg -	1837	-
New Lisbon -	Do. -	54 06	116	0	16	0	3	0	Do. -	1836	-
Wabash -	Do. -	47 32	103	0	17	2	2	10	Brownsville -	1836	-
Franklin -	Do. -	34 10	97	0	12	0	2	9	Do. -	1838	-
Camden -	Do. -	103 55	133	0	16	3	4	10	Pittsburg -	1836	-
Pike -	Do. -	35 68	97	0	12	0	2	9	Brownsville -	1838	-
Girard -	Do. -	139 00	140	0	18	6	5	6	Pittsburg -	1836	-
Embassy -	Do. -	144 92	147	0	18	6	5	6	Brownsville -	1837	-
Robert Emmett	Do. -	103 71	130	8	17	3	4	9	Wheeling -	1835	-
Reliance -	Do. -	145 74	147	0	19	3	5	6	Do. -	1837	-
Amboy -	Do. -	120 00	137	0	18	0	5	0	Do. -	1837	-

WHEELING, *November* 27, 1838.

SIR: Above is my return of the steamboats enrolled in this district. Although I have taken and had taken all the pains in my power to have the return as full and complete as possible for the time I have had, it is still imperfect, as you will perceive. As to the land engines, they are spread over such an extent of country that I have not yet completed my return. I shall be able, *I think*, in the course of a week, to send on a return as to them.

The accident which happened the steamboat Tricolor, in April, 1831, at the wharf here, as

Doc. No. 21.

2.

Wheeling, Virginia; prepared in pursuance of instructions from the resolution of the House of Representatives of June 29, 1838.

Names of owners.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When constructed.	How long in use.
R. Ray & Henry Coulter -	Jas. J. Davis	J. & W. Hanna.	25	High	-	1837	1 y'r & 4 mo.
H. Smith, Hampton & Co. W. Hamilton, G. & A. Wells, Saml. Church, R. Bier, & A. G. Catlett.	H. Smith -	-	30	Do.	-	1836	2 y'rs and 1 mo.
S. D. Hunter, M. Roberts, and Henry Wise.	S. D. Hunter	J. Henderson	25	Do.	-	1836	2 y'rs.
Geo. D. Cock, Harrison Mason, Gregg & Bennet J. S. Pringle, Woods & Mason, And. Hopkins, Herburton & Hall, Jos. Nieman, Peter Nieman, Wm. Nieman.	G. D. Cock	W. Runnels & J. McCracken.	20	Do.	-	1838	5 mo.
Geo. Evans, J. R. Smith, J. May, J. & W. Parris.	Geo. Evans -	Wm. White & E. Reno.	45	Do.	-	1836	1 y'r & 1 mo.
H. Mason, Gregg & Bennett, J. S. Pringle, Woods & Mason, Herburton & Hall, Jas. Nieman, P. Nieman, W. Nieman.	H. Mason -	-	20	Do.	-	1838	6 mo.
Moore & Clarke, Dorsey & Tyson, Forsyth & Atterbury, McKee, Harding, & Co., A M. Phillips, W. Johnston.	M. L. Virden	R. J. M. Hill W. Trimble.	55	Do.	A. M. Phillips.	1836	1 year & 11 mo.
J. J. Gregg, Robt. Rogers, Elisha Bennett.	J. J. Gregg -	J. Martin -	60	Do.	-	1837	11 mo.
David Frampton, F. S. Grismer, C. Holton, Moore & Clarke, James Hiner, Wm. Cecil, B. Reno.	D. Frampton	J. Leslie, W. Arbuthnot.	45	Do.	A. M. Phillips.	1835	2 y'rs.
S. Mason, Wm. H. Cecil, E. Hogan.	S. Mason -	R. Tusten, J. Lambdin.	60	Do.	A. M. Phillips.	1837	11 mo.
H. T. Mason, Dorsey & Tyson, Forsyth & Atterbury, J. C. Wiley, J. F. Lodwick.	H. T. Mason	W. Killen -	50	Do.	A. M. Phillips.	1837	1 y'r & 6 mo.

she was just putting out, killed and drowned eight persons *immediately*, and eight others were scalded more or less, and one or two soon after died in consequence of their scalds. The engine of the boat was 18 years old at the time. She had one large flue-boiler, which had been repaired some four years before. There was little or no water in the boiler at the time. The captain's name was Drown; he was among the killed, as was, also, the second engineer.

T. P. NORTON.

Hon. LEVI WOODBURY, *Secretary of the Treasury U. S.*

L 9.

Return of steam-engines in use in the district of Wheeling, Virginia, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of place.	Name of mill, &c.	Owners.	Power, in horses.	Use.	Kind of engine.	When constructed.	By whom constructed.	How long in use.
Ohio county, Va., Wheeling	Wheeling rolling-mill	Shoenburge & Agnew	120	- - -	High	1832	Smith & Wallace	6 years.
Do.	North Wheeling glass works	M. & R. H. Sweeney & Co.	45	Cutting glass	Do.	1820	Philips & Johnson	12 do.
Do.	North Wheeling machine shop	A. M. Philips	8	Building engines	Do.	1834	A. M. Philips	4 do.
Do.	Waterworks	City	60	Raising water	Do.	1835	Smith & Wallace	3 do.
Do.	- - -	J. W. Lumm	2	Sawing timber	Do.	1832	D. Richards	6 do.
Do.	North Wheeling saw-mill	J. Pemberton	30	Do.	Do.	1831	A. M. Philips	7 do.
Do.	Wheeling city mill	J. Junkin & Co.	20	Flouring	Do.	1829	Samuel Smith	9 do.
Do.	Fulton paper-mill	A. Armstrong & Co.	50	Paper	Do.	1836	H. Helm	2 do.
Do.	Wheeling lead factory	Baker & Roberts	12	Grinding lead	Do.	1836	Do.	2 do.
Do.	N. Birmingham distillery	P. Reilley	20	Grinding for distillery.	Do.	1827	Philips & Johnson	11 do.
Do.	Engine shop	Helm & Richardson	12	Building engines	Do.	1836	H. Helm	2 do.
Do.	Pattern & turning shop	J. McCluney	5	Turning wood	Do.	1838	Helm & Richardson	
Do.	Planing-mill	J. L. Brown & Co.	9	Planing boards	Do.	1828	Built at Pittsburg	10 do.
Do.	Point paper mill	A. & R. Fisher	65	Paper	Do.	1822	G. White	16 do.
Do.	Eagle factory	David Hull	6	Cotton	Do.	1831	Jos. Graham	7 do.
Do.	Virginia paper-mill	Wm. Lamdin & Sons	100	Paper	Do.	1835	A. M. Philips	3 do.
Do.	Wheeling sash factory & saw-mill.	Dana Hubbard	65	Lumber, &c.	Do.	1822	George White	16 do.
Do.	South Wheeling saw-mill	Bier & Hughes	65	Lumber & lath	Do.	1837	Helm & Richardson	1 do.
Do.	Wheeling brewery	Moore & Morris	10	Grinding malt, &c.	Do.	1831	Graham & Helm	7 do
Do.	Machine shop	D. Richards & Co.	5	Turning iron, &c.	Do.	1838	D. Richards & Co.	
Do.	Flint glass-works	Plunket & Miller	9	Grinding lead and cutting glass.	Do.	1838	Helm & Richardson	

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L 3—Continued.

Name of place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.—Whether flue or cylinder boiler, &c., or whether any accidents have occurred.
Wheeling -	Wheeling cotton factory.	Tyson, Moore, & Co.	25	Cotton -	High	1834	Bemis & Peterson, Pittsburg.	4 years.	
Do. -	Rope-walk -	James Waters -	6	Cordage -	do.	1836	Venant Baum -	2 do.	
Do. -	National road rope-walk.	J. W. Berry -	6	Do. -	do.	1837	Helm & Richardson	1 do.	
Do. -	Farmer's mill -	Fred. Farmer -	8	Flouring -	do.	1831	Smith & Wallace -	7 do.	
Do. -	Short-creek factory.	S. & W. Bradley	6	Wooling -	do.	1833	Rogers, Pittsburg -	5 do.	
Brooke county -	Eagle flour-mill	Miller & Gist -	30	Flouring -	do.	1829	A. M. Philips -	9 do.	
Do. -	Wellsburg paper-mill.	McCluney, Grimes, & Co.	35	Paper -	do.	1836	R. & J., Wellsburg	2 do.	
Do. -	Brooke cotton factory.	Carle, Miller, & Carle.	30	Cotton -	do.	1828	A. M. Philips -	10 do.	
Do. -	Fire brick manufactory.	Porter & Beale -	10	Fire brick -	do.	1835	Philips & Co., Steubenville.	3 do.	
Do. -	Do.	S. Freeman -	16	Fire brick and sawing timber.	do.	1836	Leach, Cinnaman, & Co., Pittsburg.	2 do.	
Do. -	Brown's mill -	J. N. Brown -	5	Grain -	do.	1831	S. Smith, Pittsburg	7 do.	
Charleston, Kanawha co., Va.	Saw & grist mill	Bibbey and Co.	25	Sawing & grinding	do.	1830	Smith and Co., Pittsburg.	8 do. -	Cylinder flue; boiler burst 1831; no injury done.
Do. -	Do. -	Wilson & Brooks	20	Do. -	do.	1838*	R. G. Wilson, Charleston.	3 months -	Cylinder boiler.
Walnut Grove -	Do. -	Lyle Millan -	25	Now burnt down -	do.	1833	Cincinnati -	5 years -	To be repaired in Kanawha salines.
Teaze's valley, Cabell co.	Grist mill -	Canterbury -	18	Grind'g, when water insufficient.	do.	-	-	-	Cylinder boiler; no accident.
Point Pleasant, Mason co.	Do. -	James Capehart	About 18 or 20.	Flour and meal -	do.	1832 or 1833	-	5 or 6 years	" "

* Part of engine used before in some mill, which burnt.

L 3—Continued.

Name of place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.—Whether flue or cylinder boiler, &c., or whether any accidents have occurred.
Point Pleasant, Mason co.	Saw & grist mill	Lewis Allen and Co.	–	Sawing & grinding	High	1834 or 1835	–	3 or 4 years	Cylinder boiler; no accident.
Mouth 13-mile creek, Mason co.	Saw mill	Byram	–	Sawing	do.	–	–	–	" "
Little Guyan, Cabell co.	Saw & grist mill	John Hanan	10	Sawing & grinding	do.	–	–	–	" "
Smithers' creek, Kanawha co.	Saw mill	A. Stockton	15	Sawing	do.	1838	Harkless & Borass, Cincinnati.	2 months	" "
Kanawha salines	Salt works	John F. Faure	2 or 3	Pumping salt water	do.	1833	Pittsburg	4 years	" "
Do.	Do.	Daniel Ruffner	3 or 4	Do.	do.	1834	Smith and Co., Pittsburg.	3 "	" "
Do.	Do.	Do.	10 or 12	Same, and grinding corn.	do.	1833	Do	5 "	" "
Do.	Do.	Cox and Hanna	2 or 3	Pumping salt water	do.	1834	Greer, Pittsburg	4 "	" "
Do.	Do.	Brayton Allen	3 or 4	Do.	do.	–	Do.	–	Not now in operation.
Do.	Do.	Charles Venable	7 or 9	Same, and grinding	do.	1833 or 1834	Pittsburg	between 4 & 5 years.	Cylinder boiler; not now in operation.
Do.	Do.	G. H. Patrick	3 or 4	Pumping salt water	do.	1833	Do.	"	Cylinder boiler; no accide'ts.
Do.	Do.	Do.	3 or 4	Do.	do.	1833	Do.	"	" "
Do.	Do.	Donnally and Noyes.	3 or 4	Do.	do.	1830	Do.	8 years	" "
Do.	Do.	Do.	8	Same, and grinding	do.	1828	Tuston, Pittsburg	10 "	" "
Do.	Do.	A. Donnally	2 or 3	Pumping salt water	do.	1834	Pittsburg	4 "	" "
o.	Do.	Donnally, Noyes, Rand, and Co.	3 or 4	Do.	do.	1831	Do.	7 "	" "
Do.	Do.	Noyes, Rand, & Co.	2 or 3	Do.	do.	1835	Do.	3 "	" "
Do.	Do.	Do.	2 or 3	Do.	do.	1830	–	7 "	" "
Do.	Do.	L. Ruffner	2 or 3	Do.	do.	1834	R. Smith, Pittsb'g	About 2 years	Cylinder boiler; not in use; no accidents.

Do.	Do.	M. M. Fugua	2 or 3	Do.	do.	1833	Do.	4 years	Cylinder boiler; no accid's
Do.	Do.	R. E. Putney	2 or 3	Do.	do.	1835	Pittsburg	2 or 3 years	" "
Do.	Do.	Henry Ruffner	2 or 3	Do.	do.	1834	Greer, Pittsburg	1 or 2 "	Cylinder boiler; not in use; no accidents.
Do.	Do.	C. L. Shrewsbury and Co.	5 or 6	Same, and grinding corn.	do.	1836	Pittsburg	2 years	Cylinder boiler; no accid's.
Do.	Do.	Do.	2 or 3	Pumping salt water	do.	1830	Greer, Pittsburg	8 "	" "
Do.	Do.	Do.	2 or 3	Do.	do.	1836	Cincinnati	2 "	" "
Do.	Do.	Sam. Shrewsbury	2 or 3	Do.	do.	1831	Smith and Little, Pittsburg.	6 "	Cylinder boiler; not in use; no accidents.
Do.	Do.	Shrewsbury and Lewis.	5 or 6	Do.	do.	1832	Smith and Co., Pittsburg.	4 or 5 years	Cylinder boiler; no accident.
Do.	Do.	Do.	2 or 3	Do.	do.	1835	Pittsburg	2 or 3 "	" "
Do.	Do.	Do.	2 or 3	Do.	do.	1830	Do.	Irregular. used	" "
Do.	Do.	Do.	2 or 3	Draining coal bank	do.	1830	Do.	6 years	" "
Do.	Do.	Heirs of John Reynolds.	3 or 4	Pumping salt water	do.	1831	Greer, Pittsburg	7 "	" "
Do.	Do.	Wm. Tompkins	8 or 10	Same, and grinding	do.	1831	Smith, Pittsburg	6 "	" "
Do.	Do.	Do.	6 or 8	Pumping salt water	do.	1832	Do.	5 "	" "
Do.	Do.	Lewis & Shrewsbury.	6 or 8	Pumping & grind'g	do.	1834	Smith and Minnis, Pittsburg.	4 "	" "
Do.	Do.	Do.	6 or 8	Pumping salt water	do.	1834	Do.	4 "	" "
Do.	Do.	Do.	3	Do.	do.	1834	Do.	4 "	" "
Do.	Do.	Do.	2 or 3	Do.	do.	1833	Do.	4 or 5 years	" "
Do.	Do.	Do.	2 or 3	Do.	do.	1833	Do.	" "	" "
Do.	Do.	Wurths and English.	2 or 3	Do.	do.	1834	Pittsburg	4 years	" "
Do.	Do.	Dickinson and Shrewsbury.	8 or 10	Pumping salt water & grinding corn.	do.	1835	Do.	1 "	" "
Do.	Do.	Thomas Wells	2 or 3	Pumping salt water	do.	1833	Do.	4 "	" "
Do.	Do.	T. R. Friend & Co.	6 or 7	Pumping and grinding corn.	do.	1832	Smith and Little, Pittsburg.	6 "	" "
Do.	Do.	Do.	3 or 4	Pumping salt water	do.	1830	Do.	8 "	" "
Do.	Do.	Lewis & Shrewsbury.	3 or 4	Do.	do.	1833	Pittsburg	4 "	" "
Do.	Do.	James Hewitt	2 or 3	Do.	do.	1832	Smith & Johnson, Pittsburg.	5 "	Cylinder boiler; not in use.
Do.	Do.	Frederick Brooks	3	Do.	do.	1829	Greer, Pittsburg	9 "	Cylinder boiler; no accid't.
Do.	Do.	Do.	4	Do.	do.	1829	Rogers, Pittsburg	8 or 9 years	" "

L 3—Continued.

Name of place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed		Remarks.—Whether flue or cylinder boiler, &c., or whether any accidents have occurred.
Kanawha salines	Salt works -	James Bream -	3 or 4	Pumping & grind'g	High	1831	Pittsburg -	7 years -	no accident.
Do. -	Do. -	Do. -	2 or 3	Pumping salt water	do.	1833	Do. -	5 " -	Do.
Do. -	Do. -	Do. -	2 or 3	Do. -	do.	1834	Do. -	4 " -	Do.
Do. -	Mill, foundry, & machine shop.	Lander, Inslee, and Co.	8 or 9	Melt'g metal, grinding corn, & driving lathes for machine shop.	do.	1836	Smith and Minnis, Pittsburg.	21 months -	Do.
Do. -	Salt works -	John B. Crokett	2 or 3	Pumping salt water	do.	1831 or 1832	Do. -	2 or 3 years	Cylinder boiler; not in use; no accident.
Do. -	Do. -	Hewitt & Wilcox	6 or 8	Pumping salt water and grinding.	do.	1833	Do. -	4 years -	Cylinder boiler; no accid't.
Do. -	Do. -	Do. -	2 or 3	Pumping salt water	do.	1830	Do. -	7 " -	Cylinder boiler; not in use; no accident.
Mouth of Cole, Kanawha co.	Saw & grist mill	John Lewis -	25 or 30	Grinding & sawing	do.	1830	-	6 " -	Cylinder boiler; no accid't.
Kanawha salines	Salt works -	Dickenson and Shrewsbury.	8 or 10	Pumping salt water, and grinding.	do.	1833 or 1834	Pittsburg -	4 or 5 years	Do. do.
Do. -	Do. -	Do. -	3 or 4	Pumping salt water	do.	1829	Do. -	9 years -	Do. do.
Do. -	Do. -	Do. -	3 or 4	Do. -	do.	1831	Do. -	7 " -	Do. do.
Do. -	Do. -	Do. -	3 or 4	Do. -	do.	1833	Do. -	5 " -	Do. do.
Do. -	Do. -	Crocket Inglis -	3 or 4	Do. -	do.	1834–5	Do. -	4 " -	Do. do.
Do. -	Do. -	R. McClanahan	4	Do. -	do.	1832	Smith and Minnis, Pittsburg.	5 " -	Do. do.
Do. -	Do. -	John Lewis -	4	Do. -	do.	'28 or '9	- -	10 " -	Do. not in use, no ac'dnt.
Do. -	Do. -	Do. -	4	Do. -	do.	1836	Do. -	2 " -	Do. no accident.
Do. -	Do. -	Do. -	2 or 3	Do. -	do.	1832	Smith's shop, Pittsburg.	5 " -	Do. do.
Do. -	Do. -	John D. Lewis	6 or 8	Same, and grinding	do.	1833	Smith and Minnis, Pittsburg.	4 or 5 years	Do. do.

Do.	Do.	Do.	2 or 3	Pumping salt water	do.	1830	Do.	7 years	Do. do.
Do.	Do.	C. G. Reynolds	10 or 12	Same, and grinding corn.	do.	1834	Do.	4 "	Do. do.
Do.	Do.	H. H. Wood	15 or 18	To be us'd for pumping and grinding.	do.	1835	Do.	never used.	Do. do.
Marshall county	Fire-brick manufactory.	Mrs. Porter	8	Fire-brick	do.	1832	Spear, Pittsburg	6 years.	
Do.	Moundsville	B. & S. H. Lockwood.	30	Flouring	do.	1832	Phillips and Co., Steubenville.	6 "	
Do.	Moundsville cloth factory.	Scoffield and Co.	6	Fulling, carding, &c.	do.	1837	D. Richards & Co.	1 "	

It may be said, in relation to all the engines used in Kanawha county, that it is almost impossible to burst a boiler. From the carelessness of the engineers, the boilers frequently become dry; and hence, in many instances, two or three boilers, or sets of boilers, are worn or burnt out, while the remaining parts of the machinery, with inconsiderable repairs, continue fit for use. There is not one flue boiler in use in the county of Kanawha. Cylinder boilers are better adapted to the purposes of sawing, grinding, and pumping, on many accounts; the chief of which, perhaps, is their entire freedom from collapse.

About nine in every ten engines in use in Kanawha county, were made at Smith's shop, in Pittsburg.

JAMES M. LAIDLEY.

WHEELING, *November* 29, 1838.

SIR: Above you have as full returns as it has been possible for me to procure in the time allowed.

Yours, respectfully,

T. P. NORTON,

Surveyor for the district of Wheeling, Virginia.

L 4.

COLLECTOR'S OFFICE,
Norfolk, October 9, 1838.

SIR: In compliance with your circular of the 29th of last June, I now transmit separate returns of steam-engines employed on board of steamboats, on railroads, and for other purposes, in the district of Norfolk and Portsmouth.

This return has been delayed for some time, in the hope that precise information might be obtained from the officers of the Portsmouth and Roanoke railroad, on the several points embraced in the return; but it has not as yet been given, owing, as alleged, to the absence of the president of the company.

I will also observe that there are two small steamboats belonging to the county of Norfolk, and one to the borough of Norfolk, used and to be used as ferry-boats between Norfolk and Portsmouth. As these boats confine their operations to the harbor, they do not take out papers, and cannot, therefore, be described so accurately as the return requires; they were consequently omitted. They are of about one hundred tons burden, twenty-horse power, and have low-pressure engines.

I have the honor to be, very respectfully, your obedient servant,
CONWAY WHITTLE, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

L 5.

COLLECTOR'S OFFICE,
Norfolk, October 17, 1838.

SIR: Your letter of the 12th instant was received yesterday. I despatched an officer to collect the information respecting steam-engines not returned.

The enclosed return, it is hoped, imbodies all the information desired, being the result of the inquiries made at the respective establishments.

I have the honor to be, very respectfully, your obedient servant,
CONWAY WHITTLE, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Norfolk and Portsmouth; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			ft. in.	ft. in.	ft. in.											Y'rs.
Pat. Henry	James river & Norfolk.	382 1	172 0	25 9	9 0	Baltimore	1832	G. Gardner	Md. and Va. S. B. co.	W. J. Chapman.	Clark	140	Low	Watchman and Bratt.	1832	6
T. Jefferson	Do	329 20	161 0	25 0	8 7	Norfolk	1834	J. G. Colley	James river S. B. comp.	J. Henderson	H. Haner	120	"	Halloway	1834	4
Fox -	Blackwater -	66 20	90 4	13 6	5 8	N. York	1834	-	W. H. Thompson.	J. S. Middleton.	W. Blanchard.	14	"	J. P. Allaire	1834	4
Old Dominion.	Hampton and Norfolk.	194 27	114 0	21 0	8 8	Norfolk	1834	J. G. Colley	M. Parks	H. F. Harding	F. Fitzpatrick.	60	"	T. Halloway	1834	4

COLLECTOR'S OFFICE, *Norfolk, October* 9, 1838.

CONWAY WHITTLE, *Collector.*

Portsmouth and Roanoke Railroad.—Information repeatedly applied for, without success.

Return of all the steam-engines in use in the district of Norfolk and Portsmouth, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Norfolk	Ætna mill	George F. Bedgelow	20	Saw and grist, and oil-press.	High	1838	Watchman and Bratt	3 m'ths.
Do	Saw-mill	John Tunis	25	Saw and grist	do	1832	Lazel Perkins & Co.	6 years.
Do	Vulcan foundry	H. Bega	12	Casting	do	1838	Wells	6 "
Do	Bark-mill	R. Drummond	20	Grinding plaster, &c.	do	1833	Smith & Co., Alexandria	5 "
Portsmouth	Saw-mill	Godwin and Co.	20	Saw and grist	do	1836	Wells, Baltimore	2 "
Do	Smith's mill	J. Eustace	4	Turning	do	1835	J. Eustace	3 "
Rochelle's depot	Nash and Co.	Nash and Co.	8	Grinding bark	do	1832	Lazel Perkins & Co.	3 "

REMARKS.

There are two other small engines, constructed by their owners, supposed to be of six or eight-horse power, and used for about twelve months.

Doc. No. 91.

L 8.

COLLECTOR'S OFFICE,
Norfolk, October 20, 1838.

SIR: Your letter of the 15th instant was received two days since. In order to obtain the statement desired of the accidents on the Portsmouth and Roanoke railroad, I went to Portsmouth that evening, and, in the office of the company, took down, in writing, the accompanying account, as given verbally by the late president of that company.

In the return heretofore forwarded, the tonnage, &c. of the Portsmouth steam ferry-boats were not given, as I had no official or other information on those points. When, however, I received your letter, I requested the surveyor to measure those vessels, and I have delayed my reply that I might communicate the result. The subjoined statement I have just received from him.

I have the honor to be, very respectfully, your obedient servant,
CONWAY WHITTLE, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Statement of the capacity of the steamboats Gosport and Portsmouth.

Gosport: 61$\frac{84}{95}$ tons, length 73 feet, breadth 18 feet, depth 5 feet 4 inches.
Portsmouth: 83$\frac{31}{95}$ tons, length 72 feet, breadth 17 feet 4 inches, depth 7 feet.

L 9.

Additional return respecting steam-engines in use in the district of Norfolk and Portsmouth.

Names of the steam ferry-boats between Norfolk and Portsmouth.	Tons and 95ths.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	When and where built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Pow. in horses.	Pressure.	By whom engine constructed.	When constructed.	How long in use.
		ft.	ft.	ft.										
Chieftain - -	101 26	79	21	6 9-10	Philad'a, 1838	Not known -	The corporation of Norfolk.	Not selected	Not selec.	48	Low	T. Halloway	1838	A few days.
Gosport - about	50 00	Not	ascertai	ned.	Do. 1832	T. Halloway	Tunis & Co., the lessees of the ferry -	J. Cornick	H. Baker	16	do	Do.	1832	6 years.
Portsmouth -	50 00	Do	Do.	Do.	Do. 1832	Do. -		–	–	18	do	Do.	1832	6 years.

Portsmouth and Roanoke Railroad.	No. and names of engines.	Power in horses.	High or low pressure.	Where and when built.	By whom built.	Names of engineers.	How long in use.
Between Portsmouth and the Roanoke river.	Numerically, 1 to 6	14 each -	High -	Two in Liverpool, in 1834.	–	Culpeper, Hope, & Knight, for all.	4 years.
				Two in Liverpool, in 1836.	Stevens -		2 years.
				One in Liverpool, in 1835.	Berry -		3 years.
				One in Philadelphia, in 1838.	Morris -		A few days.

DISTRICT OF NORFOLK AND PORTSMOUTH, *October* 17, 1838.

CONWAY WHITTLE, *Collector.*

L 10.

atement of accidents on the Portsmouth and Roanoke railroad, with their results.

On the 10th of August, 1837, the cars from Portsmouth left, at the usual ur, containing a large party on their return from a trip of pleasure to ɜ two towns of Norfolk and Portsmouth. It was expected that a lum-r-train would be met at Suffolk, where there was a turn-out; but on the :ival of the cars at that place, the train had not appeared. The captain, consulting his watch, came to the conclusion that the train ahead ıst have stopped at a turn-out farther on, when, as was afterwards as-tained, it was using every effort to get to Suffolk so as not to delay the ;ular train. This last was unfortunately started from Suffolk before ɜ other arrived, and encountered it about two miles beyond. It was ıcovered only on ehundred yards ahead, while both engines were de-ɜnding from opposite directions to the lowest level on the road; which cumstance, of course, accelerated their speed, and prevented their head-ıy being checked. The concussion was so severe that the train of pas-ıger-cars may be said to have doubled up. The engine and two first rs were driven back, and those in the rear ran over and upon them. ıree persons in the second car were killed, and twelve wounded, more less severely—two only severely, but have recovered. When the in-ligence of the accident reached Portsmouth, a train was instantly de-ıtched to render assistance. It necessarily travelled in the night, through ıtorm of wind and rain. The night was very dark, so as to prevent ob-ts at any distance being discovered. Two men were walking on the ıd, with umbrellas raised, and were travelling in the same direction with ɜmselves, which prevented their seeing the light from the engine, while ɜ severity of the storm rendered it impossible for them to hear its ap-ɔach, which they did not expect at so unusual an hour. They were, consequence, run over, and so seriously injured that they died in a few ys of their wounds.

On the 10th of December following, the train, on its return from Hali-ɾ, met with another accident. The train consisted of a large number passengers and several loads of produce. These last were put in the ır of the passenger-cars. In their progress they encountered the end one of the iron rails, the spike or bolt of which had started, or the head sted off, so that the end projected above the level of the road. It is stated ıt the inequality was so slight that the wheels would have readily pass-over it, but it was caught by a strong iron fender (which travelled be-:e the wheel) and bent up. The consequence was, that the engine was rown off the track. The headway of the passenger-cars being thus ɔpped, they were run into by the burden-cars, and ten persons injured, ·o of whom afterwards died; two were wounded seriously, and the oth-s slightly. These are the only accidents from which injury has result-. No explosion of an engine has occurred on the road.

This statement was given to me verbally by Arthur Emmerson, Esq., e president of the company at the time the accidents occurred, and until cently. And the statement so given was reduced to writing in his ·esence.

C. WHITTLE, Collector.

OCTOBER *18, 1838.*

L 11.

CUSTOM-HOUSE,
Folly Landing, July 26, 1838.

DEAR SIR: In compliance with your circular, issued from your office, *to the respective collectors of customs and to the surveyors of certain ports*, calling for information in compliance with a resolution of the House of Representatives of the 25th Congress, respecting steamboats, steam-engines, &c., I have the honor to inform you there is neither steamboat nor steam-engine belonging to the port of which I am collector, which I presume is all the information required of those ports in which no steam-power is used; should it not be, however, any further information required will be cheerfully given.

I have the honor to be your obedient servant,
SAMUEL C. WHITE, *Collector.*

Hon. LEVI WOODBURY.

L 12.

COLLECTOR'S OFFICE,
Petersburg, August 3, 1838.

SIR: In compliance with an order from the Treasury Department, I have the honor to transmit herewith returns of all the steam-engines used on land or water in the district of Petersburg.

I obtained the facts from the chief engineer of the railroad; and, as regards the steamboats, from the owners and engineers of the same; and feel a confidence in the correctness of their statements.

With very great respect, your obedient servant,
J. W. CAMPBELL, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of steam-engines used on railroads in the district of Petersburg; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Horse power.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
The Petersburg railroad, 60 miles, -	Liverpool -	15	High -	1833	Ed. Bury, Liverpool - -	The engines have been in use ever since they were received, which time corresponds generally with the year of their construction.
The Greensville and Roanoke, 18 miles -	Nottoway -	15	High -	1833	Rothwell & Hich, Bolton, England -	
The Raleigh and Gaston, 85 miles -	Meherrin -	20	High -	1833	Ed. Bury, Liverpool - -	
[Forty-five miles of the last road finished. When the other forty miles of the Raleigh and Gaston road are finished, the whole line (including a lateral branch to Blakeley) will extend about 163 miles, from Petersburg, Virginia, to Raleigh, North Carolina.]	Appamattox -	20	High -	1833	Do. do. - -	
	Staunton -	15	High -	1834	Do. do. - -	
	Petersburg -	15	High -	1834	Do. do. - -	
	Yadkin -	20	High -	1836	D. J. Burr & Co., Richmond, Va. -	
	Gaston -	20	High -	1836	C. Tayleur & Co., Warrington, Eng.	
	Raleigh -	20	High -	1836	Do. do. do. -	
	Roanoke -	20	High -	1837	Ed. Bury, Liverpool - -	
	Virginia -	20	High -	1837	B. Hich, Bolton, England - -	
	And one stationary engine in the shop of 8-horse power.	-	High.			

REMARKS.—The facts stated above were furnished me by H. D. Bird, Esq., chief engineer and superintendent of transportation, a gentleman every way worthy of confidence in his statements. The steam-engines on the Richmond and Petersburg railroad more properly belong to the Richmond district, as the greater part of the stockholders, officers, and engineers of the road, reside in the latter place. There is but one other railroad in this district, to wit: from City Point to Petersburg. This railroad will be in operation in a few days, when I will forward a separate return for it.

Since the line of steam-cars commenced running from Petersburg to the Roanoke, in 1833, there have been, at a moderate estimate, 150,000 passengers transported, without a solitary accident, as far as regards passengers; one engineer was killed by the cars running off the rails, occasioned by his own neglect and intemperance.

COLLECTOR'S OFFICE, *Petersburg, August* 3, 1838.

J. W. CAMPBELL, *Collector D. P.*

***Return** respecting steam-engines used in steamboats in the district of Petersburg; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.*

Name of steamboat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Horse power.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			ft.	ft.	ft. in.											Y'rs.
Eagle -	Betw'n Petersburg and City Point.	70 10	85	18	5 0	Baltimore.	1835 1836	Rogers, Brown, & Cutts.	P. Ryan, C. Kent, and J. Taliaferro.	P. W. Farley	M. Springs	20	High	Watchman & Bratt.	1835 1836	3
Ironette -	Betw'n Petersburg and Richmond.*	106 10	90	20	6 4	Do.	1833	Watchman & Bratt.	Rowlett, Roper, & Noble.	P. Stainback	J. Watson	40	Low	Do. -	1833	4

REMARKS.—No explosions or disasters have ever occurred in this district.

* Used in towing lighters, &c., in James and Appamattox rivers.

COLLECTOR'S OFFICE, *Petersburg, August* 3, 1838.

J. W. CAMPBELL, *Collector.*

Return of steam-engines used on railroads in the district of Petersburg; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.*	High or low pressure.	When constructed.	By whom constructed.	How long in use.
City Point Railroad - - - [This road extends from City Point to Petersburg, a distance of 10 miles.]	Powhatan -	35-horse power	High -	June, 1838	William Norris, of Philadelphia.	18 days on part of the road.

REMARKS.—The Powhatan is a seven-ton engine, with 9-inch cylinders, 16-inch stroke, 56 copper flues, 2 inches diameter, ⅛ thick, and 6 feet long, with four-foot driving wheels; and is capable of pulling 150 tons burden up a grade of 36 feet to the mile, at the speed of 15 miles to the hour.

GEORGE CLARK, *Engineer.*

* Locomotives are not reckoned by horse-power as are stationary engines.—*Engineer.*

COLLECTOR'S OFFICE, *Petersburg, August* 6, 1838.

J. W. CAMPBELL, *Collector.*

Doc. No. 21.

L 16.

CUSTOM-HOUSE, *York Town, November* 13, 1838.

In reply to your letter of the 1st instant, I have to say that no report can be made by me on the subject of steamboats, locomotives, &c., as there are none such in my district.

Very respectfully, your obedient servant,

WILLIAM NELSON.

LEVI WOODBURY, Esq., *Secretary of the Treasury.*

L 17.

Return respecting steam-engines used in steamboats in the district of Richmond; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boats.	Where employed.	Tonnage.	Length from stem to stern.	Breadth.	Depth.	Where built.	When built.	By whom built.	Names of owners.	Names of commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine was constructed.	How long in use.
		T. 95ths.	*Ft. in.*	*Ft. in.*	*Ft. in.*											
Jas. Gibbon	James river	116 35	90 00	19 3	7 3	Norf'lk	1830	L. Talbot	Va. Towing Co.	S. Skinner	P. Jones	45	Low	Unknown	Unknown	8 years in this dist'ct.
Transport	James river	73 26	74 00	17 00	6 2	N. Y.	1828	Unknown	Va. Towing Co.	T. Skinner	W. H. Jones	25	High	J. P. Allaire	1827	10 years in this dist'ct.

COLLECTOR'S OFFICE, *Richmond, (Va.,) October* 10, 1838.

THOMAS NELSON, *Collector.*

Return of all the steam-engines in use in the district of Richmond, Virginia, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Richmond - -	Machine shop -	Richmond, Fredericksburg, and Potomac railroad co.	5	To propel lathes, circular-saws, and other mach'y.	Low	1836	D. J. Burr & Co., Richmond.	2 years.
Richmond - -	Machine shop -	Richmond and Petersburg railroad co.	4	To propel lathes, circular-saws, and other mach'y.	Low	1837	England - -	Just put in use.
Richmond - -	Shockoe manufac'g company.	Shockoe manufacturing co.	15	To propel machinery -	High	1830	D. J. Burr & Co. -	4 years by said company.
Richmond - -	Richmond foundry -	D. J. Burr & Co. -	10	To propel machinery -	High	1829	D. J. Burr & Co. -	9 years.

Doc. No. 91.

24th

L 19.

Return of steam-engines used on railroads in the district of Richmond, Virginia; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Richmond, Fredericksburg, and Potomac	Roanoke	9	High	1832	Edward Bury, Liverpool	6 years.
	Richmond	14	High	1834	Robert Stephenson, Liverpool	3 years.
	Augusta	11	High	1835	Edward Bury, Liverpool	2½ years.
	Fredericksburg	11	High	1835	Edward Bury, Liverpool	2½ years.
	American	15	High	1836	Newcastle manufacturing company	2 years.
	Potomac	14	High	1836	B. Hick, Bolton	2 years.
	Louisa	14	High	1837	B. Hick, Bolton	1½ year.
	Washington	14	High	1837	Thomas W. Smith & Co., Alexandria, D. C.	1 year.
	Jefferson	14	High	1837	Summer, Graves, and Day, Southampton	½ year.
	Virginia	14	High	1838	William Morris, Philadelphia	¼ year.
Richmond and Petersburg	John Randolph	14	High	1837	Edward Bury, Liverpool	½ year.
	Sheppard	14	High	1837	Edward Bury, Liverpool	½ year.
	Stafford	14	High	1837	Edward Bury, Liverpool	½ year.
	Patrick Henry	14	High	1837	Edward Bury, Liverpool	½ year.
	Robert Morris	14	High	1837	Rothwell, Newcastle	¼ year.
	Oliver Evans	14	High	1837	Rothwell, Newcastle	¼ year.

J. H. HOPKINS.

L 20.

Return of all the steam-engines in use in the district of. Tappahannock, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Lancaster co. Virginia -	Milton saw mill -	Dr. Wm. Jones -	Thirty-three -	Sawing timber -	High	–	Nott, of New York city	Part of a year.

NOTE.—This description was obtained from the owner, by the surveyor at Carter's creek, in whose neighborhood the engine is located. This is, as far as can be ascertained, the only steam-engine located in the district.

COLLECTOR'S OFFICE, *District of Tappahannock, October* 23, 1838.

N. J. B. WHITLOCKE, *Deputy Collector.*

Doc. No. 241

Return of all the steam-engines in use in the district of Cherrystone, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Wardtown -	Ward's - -	A. W. Ward -	8	Grist and saw, castor-oil press, gins cotton, &c.	High	1834	Wells, of Balt. -	4 years -	Has always performed well.

COLLECTOR'S OFFICE, *District of Cherrystone, October* 1, 1838.

GEORGE HOLT, *Collector.*

NORTH CAROLINA.

M 1.

DISTRICT AND PORT OF WILMINGTON, (N. C.)
Collector's Office, November 9, 1838.

SIR: In compliance with your circular of the 12th July last, enclosing the resolution of Mr. Sergeant, adopted in the House of Representatives on the 29th June, I have now the honor to enclose you all the information I have been able to obtain, relative to the subject, within my district.

Immediately upon the receipt of your circular, I had a number of copies of the resolution printed, together with a circular of my own, desiring and requesting all and every information; a copy of which I addressed to each and every owner and engineer of a steam-machine within my district; and, at a subsequent date, called their attention to it through the paper of this place, and regret to say that but few have responded to my call, although I have waited until the last moment. The information I now send I have gathered with some difficulty, is accurate, and may be relied on.

Enclosed, herewith, you have statement (marked A) of engines used in propelling steamboats and dredging-boat.
Statement (marked B) of engines on railroad.
Statement (marked C) of engines, exclusive of those used in steamboats and on railroads.

I would remark, sir, that all who have favored me with a communication on the subject of steam, concur in the opinion that the greatest essentials towards the safety of all travelling by steam are good engines, and careful, sober, steady, and well-informed engineers; and that any mode by which these could be acquired and preserved would have the desired effect.

Mr. Kirkpatrick, a scientific and practical engineer, recommends, as a mode of preventing accidents from steam-boilers, the plan proposed by a committee of the Franklin Institute of Pennsylvania, with the following alterations, viz:

1st. Instead of proving the boilers of condensing engines with twice the pressure they usually carry, to try them with a pressure of but 50 per cent. above that generally used in working, as but few *boilers now used* for condensing engines will bear twice their working pressure; those constructed hereafter may be required to stand a test of twice their working pressure.

2d. That as many persons serve an apprenticeship, in effect, without any form of *indenture*, that qualification should be removed.

Mr. Rothwell, an engineer and captain of a steamboat, suggests a safety-apparatus for steam-boilers, consisting of a small valve opening inside of the boiler, and kept up by the pressure of the steam, with a sink or tube of metal or glass into the boiler, opening to the atmosphere, in which place a given quantity of mercury, on which a piston or plunger, fitted to the tube, have a connexion from the *valve* to a *lever*, and from the lever to the *piston* or *plunger*, giving the *piston* or plunger what leverage

might be found necessary; then, by the *expansion* of the *mercury* over and above the necessary allowance for certain degrees of heat, the *piston* would act on the *lever*, and the *lever* on the *valve*, thus giving warning; then, by attaching a *float to the under part of the valve, a correct indication of water, steam, and temperature of heat* would always be given, without any attention of superintendents; and much more *obeyed* by passengers, who are in the habit of running from one side of the boat to the other, and have to be notified to trim boat. The *float* should be of *metal*, hollow and open at the top: the usual head of water would be high enough to fill it, so that when the water gets low in the *boiler* the *float* will remain full; thus making an increase of weight on the *valve* of the *bulk of water* and the difference of the actual weight of metal and specific gravity.

Mr. Gwynn, civil engineer, suggests, as the most effectual mode of guarding against accidents and loss of life by steam, (which he attributes to the *want of skill in the construction of the engine, and its use*,) a plan of a *national institution*, as drawn up by Major Mapes, of the army, and himself, a copy of which accompanies this, (marked D.) All of which I have the honor to submit.

Very respectfully, your obedient servant,

L. H. MARSTELLER, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Wilmington, (N. C.;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Tons and 95ths.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
		ft. in.	*ft. in.*	*ft. in.*												
Henrietta	Between Fayetteville and Wilmington.	119 6	20 0	6 9	152 72	Fayetteville, N.C.	1818	M. Vandoozen.	Hall, Johnson & others	Benjamin Rush.	Benjamin Rush.	37	High	Rush & Mu'lenb'g	1826	12 y'rs.
Enterprise	Between Wilmington & Smithville, (U.S. employ)	98 0	14 0	7 0	92 40	Wilmington, N.C.	1829	J. K. McIlhenny.	U. States -	H. James	H. James	27	High	W'chman & Bratt	1836	2 y'rs.
Clarendon	Between Wilmington & Fayetteville.	103 0	18 11	7 8	140 66	Wilmington, N.C.	1833	Jas. Cassidy.	J. P. Brown	A.B.Rothwell.	A.B.R'thwell.	59	High	W'chman & Bratt	1833	5 y'rs.
Cotton-pl't	Between Wilmington & Fayetteville.	113 9	23 2	6 8	162 29	Wilmington, N.C.	1837	D.O.Hanlon.	D. O. Hanlon.	J. Kirkpatrick.	J. Kirkpatrick.	46	High	W'chman & Bratt	1837	1 y'r.
Boston	At present in dock -	148 0	28 3	9 9	380 0	N. York	1831	Brown & Bell.	Wilm'n and Ral'h R.R.co	–	–	150	Low	J. P. Allaire.	1831	7 y'rs.
North Carolina.	Between Wilmington & Charleston, S. C.	167 7	24 0	9 7	370 81	N. York	1837	Bishop & Simpson.	Wilm'n and Ral'h R.R.co	John Davis.	Benjamin Bates.	100	Low	W. Kemble.	1837	1 y'r.
Gov. Dudley	Between Wilmington & Charleston, S. C.	172 1	24 0	10 3	408 30	N. York	1838	Bishop & Simpson.	Wilm'n and Ral'h R.R.co	T. Ivy -	G W Betts	100	Low	J. P. Allair.	1838	About 5 mos.
Dredging-boat	Deepen'g the Cape Fear, below Wilmington.	89 5	29 0	6 6	142 82	Wilmington, N.C.	1830	D.O.Hanlon.	U. States -	H. James	H. James	22	High	At West Point.	1830	8 y'rs.

CUSTOM-HOUSE, *Port of Wilmington, (N. C.,) November* 26, 1838.

L. H. MARSTELLER, *Collector.*
By NEILL McLAURIN.

M 3—(B.)

Return of steam-engines used on railroads in the district of Wilmington, (N. C.;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Wilmington and Raleigh Railroad Company	Wayne - -	14	High	1837	Robert Stephenson - -	14 months.
Do do do -	Nash - -	14	do	1837	Do - - -	14 "
Do do do -	Halifax - -	14	do	1838	D. and J. Burr and Co. -	3 "
Do do do -	Sampson - -	14	do	1838	Do do - -	1 "
Do do do -	Stationary - -	12	do	1838	Watchman and Bratt - -	6 "

Return of all the steam-engines in use in the district of Wilmington, (N. C.) exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
								Y'rs.
Wilmington, (N. C.)	Clinton - -	P. K. Dickinson - -	39	Sawing lumber	High	1827	West Point Factory -	11
Do do -	Phœnix - -	O. G. Parsley and others -	51	do -	do	1826	Do -	12
Do do -	Cowan - -	Gilbert Potton - -	50	do -	do	1828	Do -	10
Do do -	Steam-mill, (No. 5)	Law and Savage - -	57	do -	do	1832	Watchman and Bratt	6
Do do -	Point Petre -	E. Dickinson and others -	55	do -	do	1837	Do do -	1
Do do -	- - -	Lazarus and Taylor - -	34	Planing lumber	do	1833	P. A. Sabatton -	5
Do do -	Union - -	Potter and Holmes - -	30	Beating rice -	do	–	West Point.	

NOVEMBER, 1838.

M 3—(B.)

Return of steam-engines used on railroads in the district of Wilmington, (N. C.;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Wilmington and Raleigh Railroad Company	Wayne - -	14	High	1837	Robert Stephenson - -	14 months.
Do do do -	Nash - -	14	do	1837	Do - - -	14 "
Do do do -	Halifax - -	14	do	1838	D. and J. Burr and Co. -	3 "
Do do do -	Sampson - -	14	do	1838	Do do - -	1 "
Do do do -	Stationary - -	12	do	1838	Watchman and Bratt - -	6 "

M 2—(A.)

Return respecting steam-engines used in steamboats in the district of Wilmington, (N. C.;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Tons and 95ths.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
		ft. in.	*ft. in.*	*ft. in.*												
Henrietta	Between Fayetteville and Wilmington.	119 6	20 0	6 9	152 72	Fayetteville, N.C.	1818	M. Vandoozen.	Hall, Johnson & others	Benjamin Rush.	Benjamin Rush.	37	High	Rush & Mu'lenb'g	1826	12 y'rs.
Enterprise	Between Wilmington & Smithville, (U.S. employ)	98 0	14 0	7 0	92 40	Wilmington, N.C.	1829	J. K. McIlhenny.	U. States -	H. James	H. James	27	High	W'chman & Bratt	1836	2 y'rs.
Clarendon	Between Wilmington & Fayetteville.	103 0	18 11	7 8	140 66	Wilmington, N.C.	1833	Jas. Cassidy.	J. P. Brown	A.B.Rothwell.	A.B.R'thwell.	59	High	W'chman & Bratt	1833	5 y'rs.
Cotton-pl't	Between Wilmington & Fayetteville.	113 9	23 2	6 8	162 29	Wilmington, N.C.	1837	D.O.Hanlon.	D. O. Hanlon.	J. Kirkpatrick.	J. Kirkpatrick.	46	High	W'chman & Bratt	1837	1 y'r.
Boston	At present in dock -	148 0	28 3	9 9	380 0	N. York	1831	Brown & Bell.	Wilm'n and Ral'h R.R.co	–	–	150	Low	J. P. Allaire.	1831	7 y'rs.
North Carolina.	Between Wilmington & Charleston, S. C.	167 7	24 0	9 7	370 81	N. York	1837	Bishop & Simpson.	Wilm'n and Ral'h R.R.co	John Davis.	Benjamin Bates.	100	Low	W. Kemble.	1837	1 y'r.
Gov. Dudley	Between Wilmington & Charleston, S. C.	172 1	24 0	10 3	408 30	N. York	1838	Bishop & Simpson.	Wilm'n and Ral'h R.R.co	T. Ivy -	GWBetts	100	Low	J. P. Allair.	1838	About 5 mos.
Dredging-boat	Deepen'g the Cape Fear, below Wilmington.	89 5	29 0	6 6	142 82	Wilmington, N.C.	1830	D.O.Hanlon.	U. States -	H. James	H. James	22	High	At West Point.	1830	8 y'rs.

CUSTOM-HOUSE, *Port of Wilmington, (N. C.,) November* 26, 1838.

L. H. MARSTELLER, *Collector.*
By NEILL McLAURIN.

M 3—(B.)

Return of steam-engines used on railroads in the district of Wilmington, (N. C.;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Wilmington and Raleigh Railroad Company	Wayne - -	14	High	1837	Robert Stephenson - -	14 months.
Do do do -	Nash - -	14	do	1837	Do - - -	14 "
Do do do -	Halifax - -	14	do	1838	D. and J. Burr and Co. -	3 "
Do do do -	Sampson - -	14	do	1838	Do do - -	1 "
Do do do -	Stationary - -	12	do	1838	Watchman and Bratt - -	6 "

The institution shall be governed by such regulations for its internal police as the conductors and board, appointed for that purpose, may adopt.

The clothing worn by the students shall be fashioned as the board may determine, and the button have some national device; which button may be worn, at all times, during the holding of the commission.

An assistant steam-engineer, after he shall have been two years actively engaged in his profession, may produce to the board satisfactory evidence that he has faithfully discharged his trust, and shall receive from said board, after being so satisfied, the commission of *steam-engineer*, which commission will entitle him to wear a different arrangement of the buttons from those worn by the assistant steam-engineer.

Whenever any steam-engineer, or assistant steam-engineer, shall have charge of an engine at the time it exploded, either from collapse or other cause, he shall be brought by the United States marshal, in whose district, or nearest whose district, it happens, before the district judge, who will cause an examination to be entered into, as to the causes leading to such accidents; and if it be ascertained to be from carelessness or other causes, which said steam-engineer, or assistant engineer, could prevent, his commission shall be taken from him; and his wearing the button, after his commission has been forfeited, shall be considered as an offence against the laws of the United States, and shall be punished by imprisonment at the discretion of any court before which he may be convicted.

In like case, when any steam-engineer, or assistant, shall be found intoxicated while in charge of an engine in operation, he shall be brought, in like manner, before the nearest district judge, and, if convicted, his commission shall be forfeited.

In all cases where a commission is forfeited, the name of the engineer, or assistant engineer, shall be published, with the cause of his dismissal, in two or more of the papers, and in the back of the yearly register of steam-engineers and assistant steam-engineers, which is published by the board granting the commission.

Should it be found necessary, Congress may direct that like institutions be established in different sections of the country.

To avoid the censure or injustice of the nation founding a monopoly in the manufacture of steam-engines, the price of all such as are not expressly made for the use of the Government shall be regulated by the prices at which like engines are sold by the persons already, or shall hereafter be, engaged in manufacturing steam-engines; and no engine shall be repaired at the national factories, except such as are the property of the Government.

In addition to the foregoing, it will be necessary for a board to be appointed to meet in Boston, New York, Philadelphia, Baltimore, Norfolk, Charleston, (S. C.,) New Orleans, Cincinnati, and Pittsburg, from time to time. Public notice shall be given of the time of the sitting of this board, whose object will be to examine persons employed in the charge of steam-engines, and to give a commission of assistant steam-engineer to such persons as they may find competent to the discharge of the duties: and, that after a sufficient time has been given for such board to examine all persons who may present themselves, notice shall be given that, after such a date, all boats engaged in the transportation of passengers, or carrying the United States mail, that are propelled by steam, and the engineer in charge *of her* engine be not commissioned, said engineer,

or assistant engineer, shall, for every time the engine is run with either the United States mail or passengers on board, be subject to a fine of one thousand dollars, to be recovered on conviction before any United States court; one-half the fine to be given to the person who shall cause the suit to be brought: and any person who is not commissioned as steam-engineer, or assistant steam-engineer, who shall be convicted of taking charge of a steam-engine propelling a boat, or locomotive engine attached to cars or carriages, carrying either the United States mail or passengers, shall be fined in like manner and amount, and be imprisoned for not less than four months, and as much longer as the court may determine.

As the school contemplated in the foregoing articles is one of general benefit to science and the country, it is believed to be a proper object for the appropriation of the Smithsonian legacy.

CHARLES MAPES, *Major U. S. A.*
WALTER GWYNN.

M 6.

CUSTOM-HOUSE,
Beaufort, (N. C.) Nov. 6, 1838.

SIR: In reply to your circular of 1st instant, requiring information on the subject of steamboats, locomotives, &c., called for by a resolution of the House of Representatives of the 29th June last, I have to state to you, that, as no steam-engines used in steamboats, locomotives, or otherwise, are owned in the district of Beaufort, and no explosions of such engines have occurred, and no other disasters happened to them in said district, I am unable to render any information required under any branch of the resolution referred to.

I am, sir, very respectfully, your obedient servant,
JAS. E. GIBBLE, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

M 7.

COLLECTOR'S OFFICE,
District of Ocracoke, November 14, 1838.

SIR: I have the honor of acknowledging the receipt of your letter of the 1st instant; and, in reply, have to state that there is no steamboat or locomotive belonging to, or employed in, this district.

Your letter referred to in the above communication has not been received at this office, or it would have met with prompt attention.

I have the honor to be, very respectfully, your obedient servant,
S. BROWN, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return of all the steam-engines in use in the district of Newbern, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Newbern -	Union -	John Blackwell -	40	Sawing -	High	1821	Rush & Muhlenberg -	17 years.	No accident of any kind since their construction.
Do. -	Eagle -	Do. -	40	Do. -	Do.	1831	Watchman & Bratt -	7 do.	
Do. -	Newbern -	Amos Wade & Co.	60	Do. -	Do.	1838	Do. -	2 months.	
Do. -	Union grist -	John Blackwell -	15	Grinding -	Do.	1836	Do. -	2 years.	

CUSTOM-HOUSE, NEWBERN,
Collector's Office, October 1, 1838.

THOS. S. SINGLETON, *Collector.*

M 11.

Return of all the steam-engines in use in the district of Washington, North Carolina, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owner.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Washington, N. C.	Washington steam-mills -	Joshua Taylor -	40	Sawing -	Low	1833	Watchman & Bratt	5 years	Performs well, and no accident has occurred to any of the machinery.

COLLECTOR'S OFFICE,
Washington, (N. C.) August 15, 1838.

THOS. H. BLOUNT, *Collector.*

NOTE.—No steamboat or locomotive in the district.

Return of all the steam-engines in use in the district of Camden, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Fobesville -	–	Abner Williams -	16	Grist and sawing -	High	1838	James Murray -	8 months	No steamboats or locomotives in the district.
Nixonton -	–	Jesse L. Pool -	28	Grist and sawing -	High	1838	James Murray -	3 months	

COLLECTOR'S OFFICE, *Elizabeth city, September* 29, 1838.

GEO. W. CHARLES, *Collector.*

Return of all the steam-engines in use in the district of Edenton, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	No. of years in use.	No. of steam-engines.	Remarks.
Edenton - -	Hay's - -	James C. Johnson -	30	Sawing - -	High	1835	Charles Reeder -	3½	1	
Edenton - -	Hay's - -	James C. Johnson -	25	Grinding - -	High	1835	Charles Reeder -	3½	2	
Perquimans county -	Wilson's -	William Wilson & Jos. T. Granberry.	25	Grinding - -	High	1834	Charles Reeder -	4	3	
Winton, Hertford co. -	- -	J. A. Anderson & J. Pope	30	Sawing and grinding	High	1837	John Wills -	1½	4	
Columbia, Tyrrell co.	- -	Chas. Pettigrew, Jos. Halsey, & N. A. Brickhouse.	30	Sawing and grinding	High	1838	Charles Reeder -	4/12	5	

COLLECTOR'S OFFICE, *Edenton, November* 17, 1838.

D. McDONALD, *Collector.*

M 14.

CUSTOM-HOUSE,
Plymouth, (N. C.,) August 11, 1838.

SIR: The statements herewith are sent you in pursuance of instructions in your circular of the 12th July last, which are the only ones, called for, that come under my notice in this district.

As relates to the information called for under the "ninth head," referred to in the above circular, permit me to remark that, in consequence of my inexperience in such matters, and not having the advantage of consulting persons that are capable of giving suitable information on such subjects, and there not being "any improvements in the construction of steam-engines or steamboats which have been recently introduced" in this district, I am at a loss to give the required information, and must, of necessity, leave it to the consideration of persons of more experience in such matters than myself.

I have complied with your instructions as far as I could, in as short a time as practicable.

I have the honor to be, very respectfully, your obedient servant,

J. RAMSEY, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

M 15.

Return of all the steam-engines in use in the district of Washington, N. C., exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Name of owner.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Washington - -	Washington saw-mill -	Jos. Tayloe - -	40	Sawing -	Low	1833	Watchman & Bratt -	5 years.

NOTE.—This engine performs well, and no accident has occurred to any of the machinery. No steamboat or locomotive in the district.

AUGUST 15, 1838.

THOMAS H. BLOUNT, *Collector.*

SOUTH CAROLINA.

N 1.

COLLECTOR'S OFFICE,
Charleston, (S. C.,) September 24, 1838.

SIR: I herewith transmit the return relative to steam-engines and steamboats, required by your circular of the 12th July last, giving all the information which could be obtained.

I am, sir, with great respect, your obedient servant,

J. R. PRINGLE.

Hon. LEVI WOODBURY.

N 2.

Return of steam-engines used on railroads in the district of Charleston; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad, &c.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
South Carolina Canal and Railroad Co. -	Native - -	8	High	1833	Eason & Dotterer, Charleston	About one-third of the time.
	E. L. Miller -	14	do	1833	M. W. Baldwin, Philadelphia	
	Georgia - -	12	do	1833–4	E. Bury, Liverpool - -	About one-half of the time.
	Augusta - -	12	do	1833–4	Do - - -	
	Wm. Aiken -	12	do	1834	Stephenson & Co., Liverpool	About one-fourth of the time.
	E. Houy - -	14	do	1834	Do - - -	About one-fifth of the time.
	H. Schultz - -	14	do	1835	Rothwell, Bolton, England -	
	Sumter - -	14	do	1835	Stephenson & Co., Liverpool	About one-third of the time.
	Marion - -	14	do	1835	Do - - -	
	Ohio - -	14	do	1835	Do - - -	
	Cincinnati - -	12	do	1835	Tayleur, Liverpool - -	About one-fifth of the time.
	Allen - -	12	do	1835	Do - - -	About one-fourth of the time.
	Kentucky - -	12	do	1835	Do - - -	About one-fifth of the time.
	Washington - -	10	do	1835	Eason & Dotterer, Charleston	About one-third of the time.
	Tennessee - -	9	do	1836	Rothwell, England - -	About one-sixth of the time.
	Lafayette - -	12	do	1836	Eason & Dotterer, Charleston	About one-third of the time.
	Philadelphia - -	13	do	1836	M. W. Baldwin, Philadelphia	About one-fourth of the time.
	[illegible]	[illegible]	do	1836	Eason & Dotterer, Charleston	About one-third of the time.

	William Penn -	10	do	1837	Do - - -	About one-fifth of the time.
	Moultrie - -	10	do	1837	Eason & Dotterer, Charleston	About one-third of the time.
	Vulcan - -	10	do	1837	McLeish & Smith, Charleston	About one-fifth of the time.
	Charleston - -	10	do	1837	Do - - -	
	Edisto - -	12	do	1837	M. W. Baldwin, Philadelphia	About one-third of the time.
	Barnwell - -	12	do	1837	Do - - -	
	Reading - -	10	do	1838	Dotterer, Charleston -	
	Branchville - -	10	do	1838	Do - - -	Entirely new.
Stationary engine at work-shop, Charleston	- - -	3	do	1833	E. K. Dod, New York.	
Stationary engine at work-shop, Charleston	- - -	5	do	1838	J. Ross, Charleston -	From a locomotive built by Eason & Dotterer, Charleston, 1831.
Stationary double engine at inclined plane, Aiken.	- - -	35	do	1832	West Point foundry, N. York.	

REMARKS.

There have been fifteen other locomotives, built in the United States and in England, which have been cut up and used as materials for repairing others, after having been run on the road from one to three years. There has been but one explosion on the road since its construction: no person was injured. A lesson was taught then, likely to prevent the recurrence of such an accident. The engine had a leaden plug, but no copper flues. The frequent delays which happened from the melting of the plug, induced the substitution of an iron one, and this caused the boiler to burst; care will be taken to use only a leaden one in future. In addition, since that time, copper flues have been introduced, say from 60 to 120, through the whole length of every boiler, each of which serves as a safty-valve; for, if they give way, the fire is immediately put out by the rush of water through the fracture, and thus no injury can ensue.

COLLECTOR'S OFFICE, *Charleston, (S. C.) September*, 1838.

J. R. PRINGLE, *Collector.*

N 3.

Return of all the steam-engines in use in the district of Charleston, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
City of Charleston -	Bennett's mill -	T. Bennett - -	40	Sawing lumber -	Low	1830	Boman & Galloway, England	8 yrs. *a*
" -	" -	" -	24	" -	High *b*			
" -	Napier's mill -	T. Napier and others -	30	Cleaning rice -	"	1834	Sabatan, New York -	2 " *c*
" -	McLeish's mill -	James McLeish -	6	For propelling machin'y	"	1836	James McLeish - -	2 " *d*
Charleston neck -	Carew's mill -	Ed. Carew - -	32	Sawing lumber -	"	1831	Taws, Philadelphia -	7 " *e*
" -	" -	" - -	10	" -	"	1832	" " -	6 "
" -	Cannonsboro' mill -	Estate of Jon. Lucas -	25	Cleaning rice -	Low	1820	Boman & Galloway, England	18 " *f*
City of Charleston -	Chisolm's mill -	A. H. Chisolm -	32	" -	High	1829	Sabatan, New York -	9 " *g*
" -	Gibbs's mill -	Gibbs, Williams, & Co.	20	Sawing lumber -	Low	–	– –	8 ms. *h*
" -	George-street mill -	George Salmond -	8	Grinding grist, &c. -	High	1826	W. H. Evans, Charleston -	12 yrs. *i*
Charleston neck -	Conner's mill -	Conner and Beckman -	10	" -	"	1837	T. Dotterer, Charleston -	1 " *j*
City of Charleston -	Johnson's mill -	James Johnson -	6	" -	"	1833	John Ross, Charleston -	5 " *k*
" -	Starr & Howland's mill	Starr and Howland -	25	For dressing boards, &c.	"	1836	Ch. Reeder, Baltimore -	2 " *l*
On Cooper river -	Dean Hall's mill -	W. A. Carson -	12	Sawing lumber -	"	1835	Sabatan, New York -	3 "
" -	" -	" -	8	Thrashing rice, &c. -	"	1832	Levi Morris & Co., N. Y. -	6 "
" -	Priolean's mill -	Dr. F. G. Priolean -	6	" -	"	1832	Collier & Fogartie, Charleston	6 "
St. James, Goose creek	Mims's mill -	James Mims - -	10	Sawing lumber -	"	1838	Samuel Harris, New York -	3 ms.
On Santee - -	Middleton's mill -	Estate of J. Middleton	13	Thrashing rice, &c. -	"	1837	West Point foundry -	1 year.
Cooper river - -	Grove mill -	Dr. Barnwell - -	10	For making of bricks -	"	1837	W. D. Parish, Philadelphia	1 "

Columbia. - -	Water works -	Colonel Blanding -	14	Supplying Columbia with water.	Low	1819	Boman & Galloway, England	18	"
" - -	Lomis's mill -	Lomis and Davis -	15	Sawing lumber, &c. -	High	1835	J. D. Pitsch, Charleston -	3	"
" - -	Boatwright's mill -	James Boatwright -	4	Turning lathes, &c. -	"	1838	John Lomas, Columbia.		
Winsborough, Fairfield	Campbell's mill -	Campbell & McDowell	12	Sawing lumber, &c. -	"	1836	John Ross, Charleston -	2	"
" " -	Barclay's mill -	Barclay and Cathcart -	10	" -	"	1836	Doick - - -	2	"
Beaufort - -	Talbird's mill -	John Talbird -	6	" -	"	1837	Rush & Muhlenberg, Phil'a	18	ms. *m*
" - -	" -	" -	10	" -	"	1838	Watchman & Bratt, Baltim'e	6	" *m*
St. George's parish -	Ross's mill - -	J. L. Ross - -	15	" -	"	1837	Smith & Coates, Alexandria	8	"
John's island - -	Seabrook's mill -	W. Seabrook -	10	" -	"	1834	T. Dotterer, Charleston -	4	yrs.
Edisto island - -	" -	E. M. Seabrook -	10	" -	"	1837	Levi Morris & Co., N. Y. -	1	"
St. Peter's parish -	Clydesdale mill -	D. E. Huger -	35	Pounding rice -	"	1833	J. P. Allaire, New York -	4	" *n*
" -	Laurel-hill mill -	Marron and Chairs -	35	" -	Low	1833	West Point foundry -	5	" *o*
" -	Delta mill - -	L. Cheves - -	25	" -	Rotary	1838	At Syracuse, New York.		
" -	Oglethorpe mill -	W. C. Daniels -	16	- -	High	1838	Watchman & Bratt, Balti'e *p*		

a The boiler attached to this mill has been repaired twice in this time. *b* Has been used as a saw-mill for 24 years, with various engines. Not known by whom constructed. *c* In good order. *d* In good order. *e* There was a new boiler to this mill 4 years ago. *f* There is now in use a second set of boilers, one 15, the other 6 years, in good order. *g* The boiler of this mill has been repaired within 3 years. *h* This engine was made in England; maker's name not known. New boiler made in Charleston. *i* This engine has been repaired twice with 2 new sets of boilers. *j* In good order. *k* In good order. *l* In good order. *m* Both of these engines attached to one shaft. *n* This mill has not been in operation for some time. *o* This mill was destroyed by fire last winter; but the same engine is put in a new building, and is expected to be in operation in about 2 months. *p* Not quite finished; expected to be complete in 10 days.

COLLECTOR'S OFFICE,
Charleston, (S. C.,) September, 1838.

J. R. PRINGLE.

N 3.

Return of all the steam-engines in use in the district of Charleston, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
City of Charleston -	Bennett's mill -	T. Bennett - -	40	Sawing lumber -	Low	1830	Boman & Galloway, England	8 yrs. *a*
" -	" -	" -	24	" -	High *b*			
" -	Napier's mill -	T. Napier and others -	30	Cleaning rice -	"	1834	Sabatan, New York -	2 " *c*
" -	McLeish's mill -	James McLeish -	6	For propelling machin'y	"	1836	James McLeish - -	2 " *d*
Charleston neck -	Carew's mill -	Ed. Carew - -	32	Sawing lumber -	"	1831	Taws, Philadelphia -	7 " *e*
" -	" -	" - -	10	" -	"	1832	" " -	6 "
" -	Cannonsboro' mill -	Estate of Jon. Lucas -	25	Cleaning rice -	Low	1820	Boman & Galloway, England	18 " *f*
City of Charleston -	Chisolm's mill -	A. H. Chisolm -	32	" -	High	1829	Sabatan, New York -	9 " *g*
" -	Gibbs's mill -	Gibbs, Williams, & Co.	20	Sawing lumber -	Low	–	– –	8 ms. *h*
" -	George-street mill -	George Salmond -	8	Grinding grist, &c. -	High	1826	W. H. Evans, Charleston -	12 yrs. *i*
Charleston neck -	Conner's mill -	Conner and Beckman -	10	" -	"	1837	T. Dotterer, Charleston -	1 " *j*
City of Charleston -	Johnson's mill -	James Johnson -	6	" -	"	1833	John Ross, Charleston -	5 " *k*
" -	Starr & Howland's mill	Starr and Howland -	25	For dressing boards, &c.	"	1836	Ch. Reeder, Baltimore -	2 " *l*
On Cooper river -	Dean Hall's mill -	W. A. Carson -	12	Sawing lumber -	"	1835	Sabatan, New York -	3 "
" -	" -	" -	8	Thrashing rice, &c. -	"	1832	Levi Morris & Co., N. Y. -	6 "
" -	Priolean's mill -	Dr. F. G. Priolean -	6	" -	"	1832	Collier & Fogartie, Charleston	6 "
St. James, Goose creek	Mims's mill -	James Mims - -	10	Sawing lumber -	"	1838	Samuel Harris, New York -	3 ms.
On Santee - -	Middleton's mill -	Estate of J. Middleton	13	Thrashing rice, &c. -	"	1837	West Point foundry -	1 year.
Cooper river - -	Grove mill -	Dr. Ravenel - -	15	For making of bricks -	"	1837	W. D. Parish, Philadelphia	1 "

Columbia. - -	Water works -	Colonel Blanding -	14	Supplying Columbia with water.	Low	1819	Boman & Galloway, England	18	"
" - -	Lomis's mill -	Lomis and Davis -	15	Sawing lumber, &c. -	High	1835	J. D. Pitsch, Charleston -	3	"
" - -	Boatwright's mill -	James Boatwright -	4	Turning lathes, &c. -	"	1838	John Lomas, Columbia.		
Winsborough, Fairfield	Campbell's mill -	Campbell & McDowell	12	Sawing lumber, &c. -	"	1836	John Ross, Charleston -	2	"
" " -	Barclay's mill -	Barclay and Cathcart -	10	" -	"	1836	Doick - - -	2	"
Beaufort - -	Talbird's mill -	John Talbird -	6	" -	"	1837	Rush & Muhlenberg, Phil'a	18	ms. *m*
" - -	" -	" -	10	" -	"	1838	Watchman & Bratt, Baltim'e	6	" *m*
St. George's parish -	Ross's mill - -	J. L. Ross - -	15	" -	"	1837	Smith & Coates, Alexandria	8	"
John's island - -	Seabrook's mill -	W. Seabrook -	10	" -	"	1834	T. Dotterer, Charleston -	4	yrs.
Edisto island - -	" -	E. M. Seabrook -	10	" -	"	1837	Levi Morris & Co., N. Y. -	1	"
St. Peter's parish -	Clydesdale mill -	D. E. Huger -	35	Pounding rice -	"	1833	J. P. Allaire, New York -	4	" *n*
" -	Laurel-hill mill -	Marron and Chairs -	35	" -	Low	1833	West Point foundry -	5	" *o*
" -	Delta mill - -	L. Cheves - -	25	" -	Rotary	1838	At Syracuse, New York.		
" -	Oglethorpe mill -	W. C. Daniels -	16	- -	High	1838	Watchman & Bratt, Balti'e *p*		

a The boiler attached to this mill has been repaired twice in this time. *b* Has been used as a saw-mill for 24 years, with various engines. Not known by whom constructed. *c* In good order. *d* In good order. *e* There was a new boiler to this mill 4 years ago. *f* There is now in use a second set of boilers, one 15, the other 6 years, in good order. *g* The boiler of this mill has been repaired within 3 years. *h* This engine was made in England; maker's name not known. New boiler made in Charleston. *i* This engine has been repaired twice with 2 new sets of boilers. *j* In good order. *k* In good order. *l* In good order. *m* Both of these engines attached to one shaft. *n* This mill has not been in operation for some time. *o* This mill was destroyed by fire last winter; but the same engine is put in a new building, and is expected to be in operation in about 2 months. *p* Not quite finished; expected to be complete in 10 days.

COLLECTOR'S OFFICE,
Charleston, (S. C.,) September, 1838.

J. R. PRINGLE.

N 4.

Return respecting steam-engines used in steamboats in the district of Charleston; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Name of owners.
			ft. in.	ft. in.	ft. in.				
Augusta	Charleston and Augusta	206 67	113 0	29 0	7 7	New York	1824	Brown & Bell	John Magrath & Son.
Wm. Seabrook	Charleston and Savannah	227 57	122 1	26 11	7 7	Do	1831	Lawrence & Sneeden	Wm. Seabrook, & others.
John Stoney	– – –	163 19	114 0	22 0	7 0	Do	1830	Brown & Bell	Wm. Patton, & others.
Cincinnati	Florida	211 67	121 0	23 6	8 0	Charleston	1836	James Poyas	O. L. Hilliard, & others.
Neptune	Charleston and New York	745 87	215 0	25 4	14 0	New York	1838	Lawrence & Sneeden	Southern steam-packet co.
Despatch	Santee river	53 53	85 0	17 0	4 0	Charleston	1838	James Poyas	Steam tow-boat co.
South Carolina	Charleston and Norfolk	466 13	172 0	23 0	12 2	Baltimore	1835	J. A. Robb	Atlantic steam co.
Santee	Florida	170 12	113 0	24 6	6 8	Charleston	1835	James Poyas	T. S. Kerr, & others.
Charleston	Do.	235 35	120 0	24 0	8 9	Do	1836	J. Marsh & Son	John Bonnell, & others.
James Adams	Do.	225 33	129 0	23 10	7 10	Baltimore	1836	Rogers, B., & Cully	Stacker & Hill.
John McLean	Do.	133 16	120 0	22 6	7 4	Charleston	1837	James Poyas	C. Brenan, & others.
Camden	Do.	169 00	112 0	22 6	7 3	Do	1837	Do	McDowall & Shannon.
Anson	Charleston and Cheraw	196 25	126 0	22 0	7 6	Do	1838	Do	J. Elligregg, & others.
Liberty	Charleston and Augusta	133 57	107 0	30 0	4 9	Do	1832	P. Pritchard	J. Magrath & Son.
Etiwan	Sullivan's island packet	132 14	100 0	18 4	6 4	Do	1834	James Poyas	Holmes & Dewar.
Congaree	Charleston and Columbia	134 24	112 0	23 8	5 6	Do	1835	Do	T. S. Kerr, & others.
Georgia	Charleston and Baltimore	551 93	194 0	24 0	12 2	Baltimore	1836	J. A. Robb	Atlantic steam co.
Thos. Salmond	Charleston and Camden	172 92	117 10	22 6	7 0	Do	1837	W. Gardner	W. Kennedy & Co.
Ashley ferry-boat	At the ferry	73 21	70 0	19 0	6 3	Charleston	1835	James Poyas	Bridge company.
Mud-machine	Charleston	59 65	45 0	20 0	7 0	Do	1837	Wm. Bird	T. S. Kerr, & others.

N 4—Continued.

Name of master or commander.	Name of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.	Remarks.
Henry Wicks -	Wm. Davis -	45	Low	J. P. Allaire, New York	1824	14 years	This boat was rebuilt from her keel up, in 1836, and a new boiler has just been put in her; boiler by Watchman & Bratt, Balt.
A. King - -	C. Clark -	75	Low	Do - -	1831	7 -	This boat has been lengthened 30 feet, by original builders.
W. Schoultz -	Boston Patton -	45	Low	Do - -	1830	8 -	This boat is to be cut up, and her engine put in a new one; her boilers are now in bad order.
J. P. Brooks -	Not ascertained -	60	Low	Do - -	1836	2 -	No accident has occurred to this boat.
Jas. Pennoyer -	—— Fowler -	249	Low	Do - -	1838	6 mos.	Do do.
John Miller -	H. Merrill -	60	High	Do - -	1838	2 -	Do do.
Jas. Coffee -	Wm. Shafer -	120	Low	Watchman & Bratt -	1835	3 years	Do do.
—— Poinsett -	Benj. Ellis -	80	Low	Do - -	1835	3 -	She is now repairing, with 4 new boilers.
J. Hubbard -	Wm. Bisby -	80	Low	Do - -	1836	2 -	No accident has occurred to this boat.
—— Chase -	L. White -	75	Low	Do - -	1836	2 -	Do do.
A. J. Adams -	J. Heney -	55	Low	Do - -	1837	1 -	Do do.
B. W. Donnelly -	R. Harriman -	60	Low	Do - -	1837	1 -	Do do.
F. Bordon -	—— McCrea -	60	Low	Do - -	1838	–	New boat.
D. G. Philbrick -	J. Demoranville -	35	High	Rush & Muhlenberg -	–	–	Repaired by T. Dotterer two years ago; boilers now repairing.
J. Sassard -	N. Benwick -	30	Low	Fawcett & Co., England	1834	4 -	No accident has occurred to this boat.
W. R. A. Ham -	Geo. Duffas -	30	High	Sabatan, New York -	1835	3 -	There are four new boilers on the way from N. Y., for this boat.
Wm. Rollins -	Jacob Liglier -	145	Low	C. Reeder & Sons -	1836	2 -	No accident has occurred to this boat.
M. Frederick -	Wm. English -	60	Low	Wells, Miller, & Clark -	1837	1 -	This boat carried away both shafts, between Santee and Charleston bar; cause stated, the weakness of same.
P. H. Ulmo -	P. H. Ulmo -	10	High	T. Dotterer - -	1836	2 -	There is a new engine, of 15-h. power, expected for this boat.
Jas. Hussey -	Jas. Hussey -	10	High	J. P. Allaire - -	1837	1 -	Used for cleaning out the docks.

NOTE.—The following explosions have occurred in Charleston harbor, viz: 1826, August 4—Steamboat Macon, Capt. Lubbuck, at Magwood's wharf, by which 4 negro firemen were killed; the cause, badness of the boiler. August 21—Steamboat South Carolina, Capt. Sapard, off Smith's wharf, by which one fireman was slightly scalded; the boilers, at the time, nearly worn out. 1830, August 4—Steamboat Macon, Capt. Lubbuck, at Sullivan's island, by which Mr. Bee, the engineer, was killed, and 4 negro firemen badly scalded, but recovered; the cause, supposed to be negligence. These boats are not now in use. There has been no improvement in the construction of steam-engines or steamboats recently.

COLLECTOR'S OFFICE, *Charleston, (S. C.) September*, 1838.

J. R. PRINGLE.

N 5.

COLLECTOR'S OFFICE,

Georgetown, (S. C.,) September 26, 1838.

SIR: I herewith transmit you, agreeably to the form of your circular, lists of steam-engines used in this district, and which I hope will be satisfactory. Immediately on the receipt of your circular of 12th July, I addressed letters to the persons owning steam-mills and boats, but, owing to some of the mills being back in the interior of the district, and delay in reply, I have not furnished the information as soon as I otherwise would.

I have nothing, at present, further to communicate.

I have the honor to be, very respectfully, your obedient servant,

THOMAS L. SHAW, *Collector.*

Hon. L. WOODBURY,
Secretary of the Treasury.

N 6.

Return of all the steam-engines in use in the district of Georgetown, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Georgetown -	Green's mill -	John J. Green	36	Pounding rice -	High	1832	Not known by the present owner.	6 years	The machinery of this mill was originally used for a saw-mill. Supposed to have been in use since 1827 or 1828. But boiler a new one, used since 1832.
Georgetown -	Slate's mill -	Slate & Green	12	Saw-mill for lumber	High	1836	P. & A. Sabatan.	2 years	The boiler of this mill made in 1827 or 1828, and was laid by for some year or two.
Cowford -	Cowford mill -	E. A. Benjamin	12	Saw-mill for lumber	High	1837	Sabatan, N. Y.	1 month	
Bucksville -	Bucksville mill	H. Bucks & G. H. Onley.	30	Sawing lumber -	High	1836	Watchman & Bratt, Balt.	2 years	

COLLECTOR'S OFFICE, *Georgetown, (S. C.,) September 26*, 1838.

THOMAS L. SHAW, *Collector.*

N 7.

Return respecting steam-engines used in steamboats in the district of Georgetown, (S. C.,) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives, passed June 29th, A. D. 1838.

Names of boats.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			Feet.	Feet.	Feet.											
Oceola -	Georgetown to Cheraw.	144	124	30	6	Charleston	1836	Wm. Bird	Steamboat Comp. of Cheraw.	J. H. Christian.	H. P. S. Gulliver.	45	High	John Wells	1836	18 mo.
Cheraw* -	Do.	152	103	30	6	Charleston	1832	W. Marsh & Co.	W. Thynes	W. Thynes	J. Stewart	36	Low	O. Evans's plan.		

* The engine of this boat was taken from another boat, and the time in use is not known.

COLLECTOR'S OFFICE, *Georgetown, (S. C.,) September* 26, 1838.

THOMAS L. SHAW, *Collector.*

N 8.

COLLECTOR'S OFFICE,
Beaufort, (S. C.)

SIR: In answer to your printed circular of 12th July, received the early part of August, I have made the return enclosed, which is all of the steam-engines now in operation in this district, which have come to my knowledge.

The Charleston and Hamburg railroad runs through the upper part of this district; but, having been returned in Charleston district, where it commences, I have not thought proper to urge strenuously a division of the return.

The steam-mill in Beaufort has also been returned (by letter) to Wm. J. Smith, who signs himself as inspector of steam-engines, and writes from Charleston, (he states, by the direction of James R. Pringle, collector in Charleston:) this, therefore, may be returned as in the district of Charleston, instead of Beaufort district.

Very respectfully, your most obedient servant,

DAVID TURNER,
Collector of the Port and District of Beaufort, (S. C.)

Hon. LEVI WOODBURY,
Secretary of the Treasury.

N 9.

District of Beaufort, (South Carolina.)

REMARKS.

There are no steamboats or vessels propelled by steam belonging to this district.

There is a boat now building for this district, and one is contracted for to run next winter—the first from Pocotaligo to Charleston; the other from Beaufort to Charleston and Savannah, (Ga.)

The Charleston and Hamburg railroad runs in part through this district, (viz. all south of Edisto river,) but the locomotives have been returned altogether as belonging to Charleston district, to prevent confusion. The return ought to be separated, and the distance in each district accurately stated. The president, having made one return in whole, declines a separate and distinguishing one.

Return of all the steam-engines in use in the district of Beaufort, (S. C.,) exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manuf'ry.	Name of owner.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Beaufort	Talbird's mill	T. Talbird	Two engines; one 6-horse, the other 10-horse power.	Sawing lumber	High	1st, 1836 2d, 1837	1st by Rush & Muhlenberg, Philadelphia; the other by Watchman & Bratt, Balt.	1st engine 18 mos. 2d do. 6 or 8 do.	Both of these engines work on one shaft. N. B.—There are two engines erecting in this district for beating rice and sawing lumber, which will be in operation in January next.

CUSTOM-HOUSE, *Collector's Office, Savannah, September* 1, 1838.

SIR: In obedience to circular instructions of the 12th July last, founded upon the resolutions of the House of Representatives of the 29th of June, I have the honor to make the following report, in the form of three tables or abstracts, imbodying all the information I have been able to collect in relation to the use of steam, as in use by boats, mills, or locomotives, in my district at this time, and which I hope will be satisfactory.

You called my attention, in your circular, to note recent improvements, if any, in the construction of steam-engines or steamboats. I notice one of great importance: the use of iron for wood in the construction of boats, and I think deserving of whatever encouragement the Government can afford, by allowing free importation of materials for their construction.

Very respectfully, your obedient servant,

A. B. FANNIN, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

O 2.

Return of steam-engines used on railroads in the district of Savannah; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Weight of engine.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
The Central Railroad and Banking Company of Georgia.	Tennessee -	9 tons	High	1837	M. W. Baldwin	16 months	No accident of any kind has ever happened on this road.
	Georgia -	Do	Do	1837	Do	1 year	
	Macon -	Do	Do	1838	Do	1 month	

SAVANNAH, *August* 21, 1838.

W. W. GORDON, *President.*

CUSTOM-HOUSE, *Collector's Office, Savannah, August* 24, 1838.

A. B. FANNIN, *Collector.*

Return respecting steam-engines used in steamboats in the district of of the Treasury, to enable him to comply with a resolu

Name of boat.	Where employed.	Length from stem to stern.	Breadth at broadest part.	Depth from deck to keel.	Tons and 95ths.	Where built.	By whom built.	Names of owners.
		ft. in.	ft.in.	ft.in.				
Chatham	Towing betw. Savannah & Augusta.	120 7	26 0	6 8	198 72	Savannah	Steamboat Co. of Georgia.	Steamboat Company of Georgia.
Georgia	Do -	120 0	25 6	6 0	173 37	Do -	John Caul -	Do -
Cherokee	Do -	115 6	25 6	6 8	189 06	Do -	Do -	Do -
S. Carolina	Do -	120 0	26 0	6 2	173 00	Do -	Do -	Do -
Richmond	Do -	126 0	26 0	7 9	226 40	Baltimore -	Gardner & Co.	Iron S.B.Co.
Free Trade	Do -	115 4	26 3	6 9	195 53	Charleston	J. Marsh & Son	Do -
J. Randolph	Do -	110 0	22 0	7 6	160 00	Liverpool -	John Laird -	Do -
Lamar	Do -	115 0	24 0	8 0	202 00	Do -	Do -	Do -
Oglethorpe	Do -	120 0	24 6	7 1	193 41	Savannah -	John Caul -	Sav. & Aug. S. B. Co.
Elbert	Do -	105 0	24 0	4 6	110 00	Do -	Do -	Do -
Hamburg	Do -	121 0	24 0	8 0	216 24	Do -	Watts & Corwin.	Do -
D. W. St. John.	Do & Charleston.	120 1	24 6	7 4	199 28	New river, N. C.	O'Hanlin -	P. Bennoch
D. McCrae	Do -	127 6	22 3	8 0	215 22	Wilmington	Do -	Do -
Caledonia	Do -	111 0	31 0	6 0	180 16	Charleston	J. Marsh -	Do -
Erin	Do -	90 0	18 0	5 6	60 00	Savannah -	John Caul -	Do -
Swan	Savannah river	71 0	13 7	4 4	38 34	Do -	Do -	Branch and Montmollin.
Isis	Packet -	100 3	20 0	7 0	130 05	New York	-	Claghorn and Wood.
Wm. Gaston	Do -	120 0	18 0	7 0	161 35	Charleston	James Poyas	J. W. Long
Chieftain	Savannah and Macon.	113 0	26 3	6 1	163 36	Savannah -	John Caul -	L. Baldwin and Co.
Forrester	Packet -	106 0	20 0	7 0	148 40	Do -	Do -	Claghorn & Wood.
Florida	Do -	104 0	20 5	7 4	144 78	Do -	Do -	R. W. King and others.
J. Stone	Savannah and Darien.	118 0	26 0	8 6	225 53	Hartford -	-	Macon S. B. Company.

(a) These engines have been in almost continual use since the periods mentioned. No accident has ever occurred occasioning the loss of life or limb from explosion of boilers. The first set of boilers were made in England, and were taken from the boats, after being worn out, and replaced by boilers made in New York. The same engines used at present were placed in boats long since worn out, and, from time to time, placed in new boats. Some parts of the engines have at times been broken, but replaced by others. The engines are considered as good now as ever. These boats are all constructed on the low-pressure principle, with spur and pinion wheels, balance on spur-wheel, and large fly-wheel. The water-wheels gear and ungear, run out of gear when the boat stops. The steam is worked off by the engine by this considerably adds to safety from explosions. The Chatham is built of iron; which ed from Liverpool in sheets, and put together in Savannah by Edward Nock, engi-

3.

Savannah; prepared in pursuance of instructions from the Secretary tion of the House of Representatives of June 29, 1838.

Names of masters.	Names of engineers.	When built.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine constructed.	How long in use.	Remarks.
							Years.	
Different persons.	Different persons.	1836	46	Low	Fawcett & Co., Liverpool.	1836	2	For remarks see (*a*) below.
Do -	Do -	1834	36	do	Do -	–	–	
Do -	Do -	1835	36	do	Do -	–	–	
Do -	Do -	1834	36	do	Do -	–	–	
D. G. Jones -	A. Bostick -	1836	75	do	Charles Reeder	1836	2	For remarks see (*b*) below.
S. Creswell -	D. Adams -	1832	54	do	W. Point foundry	1828	9	
B. T. Lyon -	Chs. Clarke -	1834	40	do	Fawcett, Preston, and Co. [Bratt.	1834	4	
–	–	1838	50	do	Watchman and.	1838	new	
J. W. Wood	L. Fogartie -	1836	56	do	Hall & Cunningham.	1836	2	For remarks see (*c*) below.
O. Hubbard -	P. Camanade	1836	40	high	P. A. Sabatan	1835	2	
–	–	1838	50	low	Eagle works -	1838	new	
C. Tanner -	Bond -	1836	75	high	Watchman & B.	1836	2	
Wm. Colvin	Phil. Dill -	1835	65	do	Do -	1835	3	
–	–	1829	60	do	–	–	9	
–	–	1838	25	do	Do -	1838	new.	
Losser -	–	1837	5	do	Do -	1837	1	
O. J. Reynolds	Barker -	1837	30	low	Jas. P. Allaire	1837	1	
Geo. Freeland	L. T. Spencer	1837	36	do	–	1837	1	
–	–	1836	60	high	P. A. Sabatan	1836	2	
J. H. Drake -	J. Seguine -	1835	36	low	West Point f'dry	1835	3	
John Nock -	J. Butler -	1834	30	do	West Point f'dry	1834	4	
–	–	1836	50	do	D. Copeland -	1836	2	

near. One steamboat belonging to the company took fire, and was burnt while lying at the wharf at Augusta; the cause never was ascertained.

(*b*) The John Randolph and Lamar are constructed of iron, having been imported from Liverpool in plates, and put together in Savannah. These four boats are worked on the low-pressure principle. In March, 1836, one of the boilers of the steamboat Free Trade exploded on the river, owing to the supply-cock being shut off instead of opened, as ordered, which caused the death of the captain and four hands; the boat was under way at the time.

(*c*) Two of these boats are worked on the low-pressure principle, and one on the high-pressure principle. There has been no accident of any kind from explosion since the establishment of this company. Intoxicating liquor not permitted to be used on board of any of these boats.

[*Remarks* continued on following page.]

O 3—Continued.

N. B. Besides the explosion noticed under remarks (*b*,) there have been two other explosions in this district, viz: The steamboat "Andrew Jackson," in 1831, by which the boat and cargo were made a total wreck, and five or six lives were lost; but as none of the parties interested are now here, the particulars cannot be ascertained. The other, the steamboat "Oglethorpe," on board of which one or more boilers exploded in December, 1835, by which the captain, mate, and two engineers and five hands were killed. The boat was made a total wreck; the cargo, being chiefly in tow-boats alongside of the steamboat, was mostly saved. The loss of the steamboat may be estimated at $20,000, and on the cargo $4,000. The cause of the explosion is not known, but it is believed to be carelessness. Both these boats were under way at the time of the explosion, and were both worked on the high-pressure principle.

CUSTOM-HOUSE,
Collector's Office, Savannah, Aug. 24, 1838.

A. B. FANNIN,
Collector.

NOTE.—The steamboat Pulaski, whose history will long be remembered with regret, was owned principally here, and hailed from this port. She was lost at sea this season by the explosion of one of her boilers. The particulars in connexion with this catastrophe I am not able to furnish. A committee has been appointed at a town-meeting of our citizens to make suitable inquiry, and collect such information as can be obtained explanatory of this disaster, and report the same; when that report is made, I will furnish the Department with a copy.

A. B. FANNIN,
Collector.

Return of all the steam-engines in use in the district of Savannah, exclusive of those used in steamboats and on rail-roads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Savannah	Savannah S. S. Mill Co.	Company	36	Sawing lumber	Low	1816	S. Vail, N. J.	11 years	No accidents have occurred at any of these mills.
Do.	Savannah S. Rice Mill Co.	Company	45	Pounding rice	Do.	1828	West Point Co.	10 do.	
Do.	Blake's mill	Dan. Blake	52	Do.	High	1833	Do.	5 do.	
Do.	Do.	Do.	30	Do.	Do.	1828	Old engine	10 do.	
Do.	Winkler's mill	S. Winkler	36	Sawing lumber	Do.	1834	Old engine	4 do.	
Do.	Upper steam saw-mill	Company	10	Do.	Do.	1834	– –	4 do.	
Do.	Hamilton's mill	Jas. Hamilton	50	Pounding rice	Do.	1836	West Point Co.	2 do.	
Do.	Fig-island mill	Company	40	Sawing lumber	Do.	1835	P. A. Sabatan	2 months	
Do.	Potter's mill	Jas. Potter	16	Pounding & thrashing rice	Do.	1836	West Point Co.	2 years	
Do.	McAlpin's mill	H. McAlpin	40	Sawing lumber	Do.	1838	Watchman & Bratt	New	
Do.	Hamilton's saw-mill	Jas. Hamilton	15	Do.	Do.	1838	West Point Co.	Do.	
Do.	Cheves's mill	L. Cheves	25	Thrashing-mill	Do.	1838	Syracuse	Do.	
Do.	Hager's mill	Judge Hager	30	Pounding rice	Do.	1834	Jas. P. Allaire	4 years	
Do.	Taylor's mill	H. Taylor	40	Do.	Low	1834	West Point Co.	4 do.	
Do.	Daniel's mill	W. C. Daniel	15	Thrashing-mill	High	1838	Do.	New	
		Hall & Stone	25	Sawing lumber	Do.	1838	Syracuse	6 months	

There are two new saw-mills erecting—one at Savannah, of 24 horse-power, 3 gangs of saws; and one at Beck's ferry, on Savannah river, of 20 horse-power, 2 single saws.

CUSTOM-HOUSE, *Collector's Office, Savannah, August* 24, 1838.

A. B. FANNIN, *Collector.*

O 5

COLLECTOR'S OFFICE,
St. Mary's, (Georgia,) October 26, 1838.

SIR: In obedience to instructions under date of 12th July last and 1st October instant, I have the honor to forward the return of the only steam-engine within the district. Its remote location from this place, and want of opportunity to communicate with either owner or agent of the establishment, must be my apology for the seeming delay in transmitting the return.

I have the honor to remain, very respectfully, your obedient servant,
ARCH. CLARK, *Collector.*

Hon. LEVI WOODBURY,
Treasury Department, Washington.

Return of all the steam-engines in use in the district of St. Mary's, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Burnt Fort	Saw mill	Abraham Colby, Ch. W. Cutter, and Lory Odell.	2 engines, 15-horse each.	To propel 5 saws for sawing timber.	High	1837	Jas. M. Sturtevant	1 year and 4 months.

REMARKS.—No explosion, or any damage done, by either loss of life or property.

COLLECTOR'S OFFICE,
District of St. Mary's, (Georgia,) October 26, 1838.

ARCH. CLARK, *Collector.*

O 7.

CUSTOM-HOUSE,

Collector's Office, Savannah, November 16, 1838.

SIR: In compliance with the request contained in your letter of the 9th instant, I have collected, and now respectfully submit, all the information within my reach respecting the ill-fated steamboat Pulaski.

The Pulaski was built at Baltimore, in 1837, by John A. Robb; tonnage 687$\frac{28}{95}$, measuring on deck 227 feet, and 25 feet beam; built, I believe, of the best materials, and fastened in the best manner. She was built by an incorporated company of Savannah, whose orders were that no expense should be spared in her construction and outfit to render the Pulaski a staunch and substantial sea-boat, in every respect. The master of the boat, Captain Dubois, superintended the building.

The Pulaski was furnished with a superior engine; two copper boilers, of 200-horse power, built by Messrs. Watchman & Bratt, of Baltimore; in the construction of which, every effort was made by the builders, as well as those having charge of the construction, to make it complete, in every respect.

The Pulaski was built to run as a packet between Savannah and Baltimore, touching at Charleston, and commenced her regular trips in May, 1838. Previous to the 8th of June she had made two successful voyages to and from Baltimore. She sailed from Savannah on her third voyage, on the morning of the 13th of June, having on board 80 passengers. She arrived at Charleston the same day, and there received on board about 60 passengers in addition, making the number of passengers 140, which, with the officers and crew, made the number of persons on board, on leaving Charleston, about 170. She sailed from Charleston on the morning of the 14th of June, and proceeded on her voyage, to the satisfaction, as we are told, of all on board. At 10 o'clock on the night of the 14th instant the officers then on duty, viz: Captain Pearson, sailingmaster, and Mr. Chicken, the 1st engineer, gave the boat and engine in charge of Mr. Hibbert, the 1st mate, and Mr. Cannon, the 2d engineer, and retired to rest. At about 20 minutes past 10 o'clock the starboard boiler exploded, making a complete wreck of the boat, which, in about one hour after the explosion, broke asunder, about midships. At this time it is believed that a great number of the passengers perished. It has been ascertained that 59 of the passengers and crew were saved, by means of the small boats and the fragments of the wreck. The remainder of the passengers and crew (about 110) met a watery grave. The cause of the accident can only be conjectured. It is believed, however, that the 2d engineer, who was on duty at the time the boiler exploded, was not competent for so important a trust. It is supposed that, immediately on taking charge, at 10 o'clock, he had ordered the blow-off cock to be opened for the purpose of clearing the boiler of sediment, and neglecting to shut, or to order it to be shut, the water in the boiler very soon became low, exposing the flues to the action of the fire—thus rendering an explosion certain.

Soon after the disaster of the Pulaski, a public meeting of the citizens of Savannah was called, at which a committee was appointed, whose duty it was made to investigate the condition and outfit of the Pulaski, the cause of the loss, and all the circumstances connected with it. That com-

mittee have been engaged in collecting testimony from various sources, and are expected soon to report. To that report, when made, I will bring your attention, as furnishing a more detailed statement in relation to the loss of the Pulaski, and the melancholy circumstances attending it.

I have the honor to be, very respectfully, your obedient servant,

A. B. FANNIN, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

O 8.

Return of all the steam-engines in use in the district of Brunswick, Georgia, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
On the Alatamaha river, 6 miles above Darien.	Hopeton mill -	Cooper & Hamilton	15	Beating rice & grinding cane.	Low -	1829	Watt & Bolton -	9 years.	
On the Alatamaha river, 1 mile above Darien.	Upper steam-mill	Doctor Turner -	35	Saw-mill -	Do. -	1818	Do. -	20 do.	Once burnt and rebuilt.
On the Alatamaha river, in front of Darien.	Butler's mill -	J. & P. Butler -	30	Beating & thrashing rice.	High -	1833	Baldwin -	5 do.	
On the Alatamaha river, 1 mile below Darien.	Lower steam-mill	Jacob Wood -	60	Saw-mill -	Do. -	1818	Watt & Bolton -	20 do.	Once burnt and rebuilt.
On the Alatamaha river, 12 miles below Darien.	Doboy mill -	Doboy Company -	60	Do. -	Do. -	1836	Allaire, N. Y. -	1 year.	
On the Alatamaha river, 12 miles below Darien.	Doboy oil-mill -	Saml. Palmer -	15	Oil-mill -	Rotary	1835	H. Nott & Co., N. Y.	2 years.	

COLLECTOR'S OFFICE, *District of Brunswick, Georgia,*
Port of Darien, October 26, 1838.

JNO. N. McINTOSH, *Collector.*

O 9.

COLLECTOR'S OFFICE,
Sunbury, October 15, 1838.

SIR: As there are no steam-vessels belonging to or leaving this port, I have no reports to make touching either branch of the resolution annexed to the circular of the 12th July, 1838.

As relates to legislative enactments upon the subject, I would suggest the limiting of steam-vessels to a moderate and safe speed, in proportion to the power of the engine used;

The appointment of a board of scientific gentlemen, in suitable and convenient ports, consisting of from three to five, whose duty it shall be to examine engines and grant certificates of qualification;

That all steam-vessels be required to have in employment not less than two engineers, who have been examined by the board, and have certificates granted;

The appointment of a coppersmith and a blacksmith in the several ports where steam-vessels belong, whose duty it shall be to examine the boilers of steamers after *every trip*, instead of the examination required by the law now in operation, which is not *less* than every *six months*, and that, too, by persons who are not judges.

Very respectfully, your obedient servant,
W. MAXWELL, *Collector D. S.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

O 10.

COLLECTOR'S OFFICE,
Hardwick, October 3, 1838.

SIR: Your circular of the 12th July, 1838, requesting certain information relative to steamboat accidents, &c., has been received. In reply, I beg to state that the port of Hardwick has never been visited by a steamboat, and no kind of steam-engines are used in the town of Hardwick.

I have the honor to be, very respectfully, your obedient servant,
BENJ. STILES, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

O 11.

COLLECTOR'S OFFICE, *District of Brunswick*, (*Geo.*,)
Port of Darien, October 22, 1838.

SIR: I herewith have the honor to forward you the statements called for by your circular of the 12th July, 1838, respecting steam-engines used

in steamboats, and of all the steam-engines in use in this district, exclusive of those used in steamboats and on railroads. The absence of the proprietors of some of the steam-engines in this district, (who were absent travelling,) and no agent left from whom the requisite information could be procured until their return, has caused the present delay.

With great respect, I have the honor to be, sir, your very obedient servant,

JOHN N. McINTOSH, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

Return respecting steam-engines used in steamboats in the district of Brunswick, Georgia; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-d'k to keel.	Where built.	When built.	By whom built.	Names of owners.
			Feet. In.	*Feet. In.*	*Feet. In.*		*Year.*		
Comet - -	On the Alatamaha river, from Darien to Macon.	65 84	81 0	18 0	4 10	Charleston, S. C.	1834	John Poyas -	Ochmulgee Steamboat Company.
Alatamaha - -	On the Alatamaha river, from Darien to Macon.	–	–	–	–	Savannah -	1836	John Cant -	Ochmulgee Steamboat Company.
Ochmulgee -	From Darien to Savannah - -	231 00	117 0	25 10	8 5	Charleston, S. C.	1836	Wm. Kirkwood.	Ochmulgee Steamboat Company.
Wave - -	On the Alatamaha river, from Darien to Milledgeville.	–	–	–	–	Savannah -	–	John Cant -	Nicholas & Deming.
Excel - -	Between Darien and Macon -	59 05	90 0	16 8	–	Savannah -	1834	E. Reed -	Macon Steamboat Company.
Superior - -	Between Darien and Macon -	156 07	85 8	20 0	–	Savannah -	1835	Hugh Watts	Macon Steamboat Company.
Pioneer 2d - -	Between Darien and Macon -	–	–	–	–	Macon, Ga.	1835	–	James R. Butts.
Pioneer 3d - -	Between Darien and Macon -	–	–	–	–	Macon, Ga.	1836	–	James R. Butts.
David Crockett -	Alatamaha river - - -	65 84	81 0	18 0	4 10	Charleston, S. C.	1834	–	David Kidd.

O 12—Continued.

Name of boat.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.	The explosions or other disasters which have happened to such engines.	When.	Where.
Comet - -	Various -	Various -	2 engines, 35-horse power each.	High	D. Copeland -	1834	4 years	No disaster	None -	Nowhere.
Alatamaha -	Various -	Various -	2 engines, 35-horse power each.	High	D. Copeland -	1836	2 years	No disaster	None -	Nowhere.
Ochmulgee -	P. Blunkinship.	H. and J. Bills.	40-horse power -	Low	J. P. Allaire, N. York.	1834	3 years	No disaster	None -	Nowhere.
Wave - -	-	Bevins -	2 engines, 35-horse power each.	High	D. Copeland -	1834	3 years	No disaster	None -	Nowhere.
Excel - -	J. S. Wilcox.	-	2 engines, 12½-horse power each.	High	D. Copeland -	1834	4 years	No disaster	None -	Nowhere.
Superior - -	Wm. Johnson.	B. Dillon	2 engines, 12½-horse power each.	High	D. Copeland -	1834	3 years	No disaster	None -	Nowhere.
Pioneer 2d -	J. S. Goodwin.	-	- -	High	J. P. Allaire, N. York.	1835	6 mos.	Exploded -	January 31, 1836.	On the Alatamaha river.
Pioneer 3d -	J. S. Goodwin.	-	- -	High	J. P. Allaire, N. York.	1836	2 mos.	Burnt -	May, 1837 -	On the Alatamaha river.
David Crockett	Thos. Athey	-	- -	High	-	1834	4 years	No disaster	-	Nowhere.

Name of boat.	Cause of explosion or disaster.	Loss of life.	Loss of property value.	Injury to persons.	Injury to property.	Mode of injury, by burning, scalding, wound'g, drowning, or otherwise.	Cause of disaster to steamboats, by explosion, collision, fire, or otherwise.	How such steamboats were manned; whether intoxicating liquors were served out, or permitted to be used by the hands or persons employed on board.	The names of the owners, masters, commanders, and crews of such boats.
Comet	No explosion	None	None	None	–	No injury	No disaster	Liquors used by the officers.	Ochmulgee Steamboat Company.
Alatamaha	No explosion	None	None	None	–	No injury	No disaster	Liquors used by the officers.	Ochmulgee Steamboat Company.
Ochmulgee	No explosion	None	None	None	–	No injury	No disaster	No liquors used	Ochmulgee Steamboat Company.
Wave	No explosion	None	None	None	–	No injury	No disaster	No liquors used.	Nichols & Deming
Excel	No explosion	None	None	None	–	No injury	No disaster	No liquors used by hands.	Macon Steamboat Company.
Superior	No explosion	None	None	None	–	No injury	No disaster	No liquors used by hands.	Macon Steamboat Company.
Pioneer 2d	Unknown	10 persons killed.	$35,000	7 persons severely fractured.	$35,000	Scalding	Expl'd at Wood's landing.	Liq'rs were permitted.	J. R. Butts, owner, & J. S. Goodwin, commander.
Pioneer 3d	Unknown	None	15,000	None	Steamb't only.	None	Burnt	No liquors served out.	Pioneer Steamboat Co., and J. S. Goodwin, com'der.
David Crockett	No explosion	None	None	None	Steamb't only.	None	No disaster	Liq'rs were permitted.	David Kid, owner, & Thos. Athey, commander.

COLLECTOR'S OFFICE, *District of Brunswick, (Ga.,)*
Port of Darien, October 22, 1838.

JOHN N. McINTOSH, *Collector.*

Doc. No. 21.

FLORIDA.

P 1.

COLLECTOR'S OFFICE,
Key West, November 2, 1838.

SIR: In answer to the circular of the Department of 12th July last, and supplemental circular of October 1st, I have to report that there are no steam-vessels owned or *employed* in this district. Steamboats pass and repass from the northern to the southern cities occasionally, but very rarely come to an entry at this port. No explosions or disasters have occurred within the district, to my knowledge.

I have the honor to be, very respectfully, sir, your obedient servant,
A. GORDON, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Report of all the steam-engines in use in the district of St. John's, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Black creek	Black-creek mill	Wood & Broward	15	Sawing	High	1838	Avery	3 months.
Jacksonville	Blanchard	Blanchard & Rider	30	Sawing	High	1835	Hinckley	3 years.

NOTE.—No steamboats or locomotives in the district.

JAMES DELL, *Collector.*

19

P 3.

COLLECTOR'S OFFICE,
St. Augustine, October 15, 1838.

SIR: Two or three days ago I had the honor to receive your supplemental circular of the 1st instant, on the subject of the return required from collectors, of the steamboats employed, and the accidents and loss of life and property which have attended their use, &c.

I should have answered your letter of the 12th July last, on this subject, but, on receipt of it, I did not consider that there was any thing for me to report that occurred within my district.

I believe, from the best information I can obtain, that there is not a single steamboat owned, wholly or in part, by any person residing in any part of Florida; and the only accident which has happened within my knowledge, (except those which I read in newspapers in distant places,) was one that occurred in December, 1836, to the Dolphin, on her voyage from Charleston to this port, somewhere between the mouths of Savannah and St. John's rivers, when the boiler of this steamboat burst, and several of the passengers, seamen, and workmen were killed; but what property on board was lost, I do not know; and whether the steamboat itself was eventually preserved or not, I never learned. I had a little grand-daughter, about ten years of age, on board of that steamboat, called the *Dolphin*, coming with her father, Captain Harvey Brown, of the army of the United States, her mother, two young brothers, and an elder sister. That little girl being on the deck of the steamboat when the boiler burst, she was instantly scalded to death. But Captain Brown, his wife, and the other children, being in the cabin, entirely escaped from injury, and came to this place, a few days after, in another steamboat.

I did not consider this disaster as having occurred within my collection district; and therefore did not before now report the same to your Department.

With great respect, I have the honor to be, your obedient servant,
JOHN RODMAN.

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

P 4.

COLLECTOR'S OFFICE,
District of Appalachicola, October 25, 1838.

SIR: I have used my best exertions to render my report of steamboats and steam-engines in use in this district as complete as possible, and in time to enable you to comply with the resolution of the House of Representatives of 29th June, 1838, accompanying the circular of 12th July: *in which,* in conclusion, "a statement of such legislative enactments as

may appear to be necessary is also requested." In reply to which, I would most respectfully urge, as a matter of the highest consequence in effecting the object of the law or intention of Congress, in preventing the frequency of accidents to steamboats, that no person shall be employed, either as first or second engineer of any steamboat, who shall not have first obtained a certificate as to his entire competency to take charge of and manage any steam-engine, from persons, duly appointed by the President, authorized to grant such certificates. To the engineer may be traced all the accidents I have ever known, although much is to be attributed to the character of the water; as, for instance, there has been no accident of consequence ever happening on this river, the water being, in the general, very clear; whereas, on the Mississippi, (a very dirty water,) accidents are very frequent; and on salt water accidents will be found to be quite frequent when the greatest attention is not paid to cleansing the boilers.

All of which is most respectfully submitted for your consideration.

I have the honor to be, your most obedient servant,

G. J. FLOYD, *Collector.*

HON. LEVI WOODBURY,
Secretary of the Treasury, Washington city, D. C.

rn respecting steam-engines used in steamboats in the district of Appalachicola; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Names of boats.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
			ft.	ft.	ft. in.			
Irwinton	Appalachicola river	105 00	115	22	4 6	Madison, Indiana	1836	C. Howard.
Mary Emeline	Do	75 66	90	15	5 0	Fort Gaines, Georgia	1835	
Tomochichi*	On the sea	236 54	140	24	7 0			
Oceola	Appalachicola river	102 30	115	18	5 0	Pittsburg	1836	
Alabama	Do	127 00	120	18	5 0	On Chattahoochee	1837	H. Bickerstaff.
Floridian	Do	99 15	120	18	5 0	Cincinnati, Ohio	1836	W. Stapler.
Hyperion	Do	124 80	118	18	5 0	Jeffersonville, Indiana	1833	W. Greene.
Ellen	Do	117 00	120	18	5 6	Do	1833	G. French.
Edwin Forrest	Flint river	27 21	90	14	2 6	Flint river, Georgia	1834	Butts & Day.
Frances	Appalachicola river	112 72	115	24	4 6	Pittsburg	1837	Unknown.
Rodney	Do	99 00	120	18	4 6	Do	1837	Do.
Commerce	Appala'la and Flint rivers	124 67	110	17	5 0	Do	1834	Do.
Jon	Do	99 00	100	16	6 0	Unknown	–	Do.
Cuba	Do	125 00	130	17	5 0	Cincinnati	1834	Do.

P 5—Continued.

Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
Field, Morgan, & Co.	Isaac Brown			High		1836	2 years.
T. J. Watts, & others	T. J. Watts			High		1835	3 years.
Butts & Day	—— Holland			High.			
S. Jones	—— Robinson	—— Vanorman		High		1836	2 years.
H. Bickerstaff	H. Bickerstaff			High		1832	5 years.
W. Stapler & Co.	W. Stapler	—— Lockley		High		1836	2 years.
Churchill & Wood	D. D. Churchill	—— Hyde		High		1832	6 years.
John Jenkins	J. Jenkins	J. Hewall	from 40 to 80	High	Baty & Curry	1833	5 years.
E. Butts & Day	E. Butts			High		1834	4 years.
Walker & Mitchell	J. P. Niles			High		1837	1 year.
R. Fitzpatrick	E. J. Wood	Wm. McLane		High		1837	1 year.
A. P. Bennett	J. Y. Smith	James Younger		High.			
This boat is now under seizure, violating act 1807, prohibiting the carrying slaves coastwise				High.			
H. S. Smith	H. S. Smith	H. Mears		High	Beckwith & Co.	1834	4 years.

* Changed her district.

COLLECTOR'S OFFICE, *District of Appalachicola, October 25, 1838.*

G. J. FLOYD, *Collector.*

...n of steam-engines used on railroads in the district of Appalachicola; prepared in pursuance of instructions ...om the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
St. Joseph and Lake Wimmico	St. Joseph -	12	High -	1836	M. W. Baldwin -	2 years -	Entirely approved.
Do. do. -	Wimmico -	12	High -	1837	Do. -	18 months -	Entirely approved.

Return of all the steam-engines in use in the district of Appalachicola, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When const'ed.	By whom constructed.	How long in use.
Appalachicola -	Cotton press -	Hiram Manley -	18	Compressing cotton -	High -	1834	J. P. Allaire -	3 years.
Appalachicola -	Mud machine -	Benjamin Hurd -	15	Excavating a channel -	High -	1833	J. P. Allaire -	4 years.
Jola -	Saw mill -	Snell & Street -	30	Sawing lumber -	High -	Unknown	Unknown -	6 years.
Old Woman's Bluff	Saw mill -	Manley, Potts, & Co.	10	Sawing lumber -	High -	1835	J. P. Allaire -	2 years.

REMARKS.—The engine owned by Snell & Street was first used in a steamboat; since applied to a saw-mill, with new boilers, and is considered first-rate. The engine owned by Manley, Potts, & Co. was made for a shingle machine, and used as such in New York; since brought here to be used in a saw-mill.

COLLECTOR'S OFFICE, *District of Appalachicola, October* 25, 1838.

G. J. FLOYD, *Collector.*

Doc. No. 21.

P 7.

COLLECTOR'S OFFICE,
Pensacola, October 10, 1838.

SIR: I herewith transmit a return of the steam-power employed in this district, both on land and water, agreeably to your circular of the 12th July, 1838. I regret that circumstances have occurred which prevented this being done earlier, one of the owners being dead, and the other absent.

If any more general information should come to my knowledge at any time, it will be promptly communicated.

I have the honor to be, with much respect, your most obedient servant,

ROBERT MITCHELL,
Collector.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Pensacola; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			feet.	feet.	ft. in.											Y'rs.
Charleston Packet.	Bay and waters of Pensacola.	79 72	117	17	4 2	State of Ohio	1834	Not known.	J. N. C. Stockton & Co.	O. Bostwick	Jas. Slocum	34		Unknown.	1834	1½
Le Roy -	Do. -	83 19	110	16	5 0	Pennsylvania	1836		Do -	L. Bostwick	Geo. Dingle	38	High.		1836	2

COLLECTOR'S OFFICE, *Pensacola, October* 10, 1838.

ROBERT MITCHELL, *Collector.*

Doc. No. 61.

Return of all the steam-engines in use in the district of Pensacola, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Head of Escambia bay.	None -	W. Anderson	40	Sawing lumber.	High	1837	Watchman & Bratt, of Baltimore.	1 year.	No accident, or persons injured. No spirituous liquors allowed to the hands employed.
Do -	Do -	J. A. Cameron	40	Do -	Do	1837	Do -	Do	No accidents, or persons injured. No spirituous liquors allowed to the hands employed.

COLLECTOR'S OFFICE, *Pensacola, October* 10, 1838.

ROBERT MITCHELL, *Collector.*

Doc. No. 21.

COLLECTOR'S OFFICE, *Pensacola, October* 25, 1838.

SIR: In my return to you of the 10th instant, of the steam power in this district, I omitted the steamboat Champion. As there was no person here who could give me the information desired, and as this boat was lying at New Orleans all the summer repairing, I was under the impression that she had been sold. This boat has now arrived here; and as she is still owned at this port, I have obtained, and now annex the proper information, and beg that it may form a part of my former return.

I have the honor to be, with much respect, your most obedient servant,

ROBERT MITCHELL, *Collector.*

Hon. LEVI WOODBURY, *Secretary of the Treasury.*

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Name of master.	Name of engineer.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			Feet.	Ft. in.	Ft. in.											
Champion	Florida coast.	241 88	151	20 6	8 1	N. York	1834	C. Vanderbilt.	T. M. Blount Geo. Willis J. McC. Baker	J. McC. Baker.	J. Weaver	120	Low	West Point foundry.	1833 and 1834	4 years.

ALABAMA.

Q 1.

CUSTOM-HOUSE,

Mobile, November 14, 1838.

SIR: I have the honor to acknowledge the receipt of your circular of November instant, on the subject of steamboats and locomotives, &c.

All the information that is in my power to afford is herewith enclosed; but I am satisfied it is not as full as it should be. There are many steam-mills in this county and vicinity; and upwards of twenty letters have been written, requesting the information required by the House of Representatives; but thus far no answers have been received. I must, therefore, conform my report to such facts as I am in possession of.

With great respect, I have the honor to remain your obedient servant,

JOHN B. HOGAN, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Q 2.

Return respecting steam-engines in steamboats in the district of Mobile; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons & 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
			ft. in.	ft. in.	ft. in.			
Despatch -	Rivers of the Alabama -	105 15	119 0	18 6	5 0	Wheeling -	1835	Unknown.
Juniatta -	Do. - -	121 00	130 7	17 6	5 3½	Pittsburg -	1832	Do.
Mary Express -	Between Mobile and Stockton -	54 68	76 0	15 7	5 0	Mobile -	1836	E. Clark.
Pilot - -	Rivers of the Alabama - -	128 60	140 0	19 0	5 3	Pittsburg -	1836	Unknown.
Roanoke -	Do. - -	151 10	129 0	19 0	6 5	Louisville -	1834	Do.
Ouachita -	Between Mobile and New Orleans	160 00	127 0	21 0	6 4	Cincinnati -	1835	Do.
Emblem -	Rivers of the Alabama - -	120 70	135 0	18 6	5 0	Do. -	1836	Do.
Anna Calhoun -	Do. - -	137 00	132 0	18 0	6 6	Steubenville -	1835	Calhoun.
Mazeppa -	Between Mobile and New Orleans	114 40	131 0	18 0	5 0	Cincinnati -	1835	Unknown.
William Hulbert -	Alabama rivers - - -	107 60	130 0	19 6	4 6	Pittsburg -	1836	S. Walker & Co.
Pioneer -	Do. - - -	139 56	131 9	19 0	5 10	Do. -	1835	S. Stevens.
Tennessean -	Do. - - -	370 06	102 3	27 6	9 5	Cincinnati -	1829	Unknown.
Ploughboy -	Do. - - -	142 53	131 0	19 9	5 9	Pittsburg -	1834	Do.
Caroline -	Between New Orleans and Mobile	177 44	134 10	16 11	7 7	New York -	1836	Do.
Cahawba -	Alabama rivers - - -	145 00	117 0	22 6	6 0	Cincinnati -	1837	Do.
Gov. Israel Pickens	Do. - - -	218 35	145 0	25 0	6 6	Do. -	1837	Do.
Comet - -	Do. - - -	126 65	124 0	19 10	5 5	Pittsburg -	1835	Do.
Caroline -	Do. - - -	187 48	129 8	22 9	6 9	New Albany -	1832	Do.

Q 2—Continued.

Name of boat.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
								Years.
Despatch	L. Howard	Lewis Howard	Unknown	Unknown	High	Unknown	1835	3
Juniatta	Ewing, Kinney, Miller	H. R. Miller	John Culverson	Do.	Do.	Do.	Unknown	Unknown.
Mary Express	Ward Taylor	Charles Foster	John Knight	Do.	Do.	Do.	1836	2
Pilot	S. B. Ewing	T. W. Adrian	B. S. Kakes	Do.	Do.	Do.	1836	2
Roanoke	Tarlton & Bates	S. Bates	Campbell	Do.	Do.	Do.	1834	4
Ouachita	W. H. Hutchings	P. Ricard	J. Swittle & Valentine	Do.	Do.	Do.	1835	3
Emblem	Fry and Bryan	W. H. Pendarris	Emmet & Oakes	Do.	Do.	Do.	1836	2
Anna Calhoun	John Tarlton	S. Bates	Campbell, 2d	Do.	Do.	Do.	1835	3
Mazeppa	R. Harwell	Samuel Griffin	Unknown	Do.	Do.	Do.	1835	3
William Hulbert	B. W. Martin	B. W. Martin	Do.	Do.	Do.	Wardley & Benner	1836	2
Pioneer	H. Montgomery	W. M. Young	James Ames, 1st	Do.	Do.	Stackhouse & Tomlinson	1835	3
Tennessean	J. Drummond	A. McDonald	J. Brown, P. Adams	Do.	Do.	Unknown	1829	8
Ploughboy	John Thomson	John Thomson	Unknown	Do.	Do.	Do.	1834	4
Caroline	C. Minge	W. C. Sutton	Do.	Do.	Low	Do.	1836	2
Cahaba	Babcock and White	J. H. Vail	Do.	Do.	High	Do.	1837	1
Gov. Israel Pickens	S. B. Ewing	L. Hammond	Do.	Do.	Do.	Do.	1837	1
Comet	Cleveland & Adams	J. G. Cleveland	H. Birmingham, 1st	Do.	Do.	Do.	1835	3
Caroline	J. L. Parker	James Olmstead	Unknown	Do.	Do.	Do.	1832	6

Q 2—Continued.

rn of steam-engines used on railroads in the district of Mobile; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of company.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
Mobile and Cedar Point Railroad Company.	Eclipse - -	36	High - -	M. W. Baldwin -	1836	Since August 19, 1837.

COLLECTOR'S OFFICE,
District of Mobile, November 14, 1838.

JOHN B. HOGAN, *Collector.*

LOUISIANA, &c.

R 1.

COLLECTOR'S OFFICE,
New Orleans, November 1, 1838.

SIR: I have the honor to transmit, herewith, returns Nos. 1 to 4, inclusive, furnishing the information (as full as it was practicable to obtain) called for in your letter dated 12th July last, in relation to steamboats and steam-engines in this district.

The expenses of obtaining this information by a special agent will be charged in my accounts for the present quarter; referring to your letter, by date, as my authority for making the expenditure.

I have the honor to be, most respectfully, your obedient servant,
JAS. W. BREEDLOVE, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington.

Return of steam-engines used on railroads in the district of Mississippi; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	Length of stroke, in inches.	Diameter of cylinder, in inches.	Pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Pontchartrain - -	Pontchartrain -	24	–	–	High	1832	Rothwell, Hick, & Rothwell.	5 years	
Pontchartrain - -	Creole - -	20	–	–	High	1833	Edward Bury -	4 years	
Pontchartrain - -	Fulton - -	16	–	–	High	1834	Benj. Hick & Son	3 years	
Pontchartrain - -	Orleans - -	16	–	–	High	1836	Edward Bury -	2 years	
Carrolton - - -	Enterprise -	30	9	18	High	1836	W. Norris -	2 years	The engineer declined calculating the horse-power, and gave, instead, the diameter of the cylinder, and the length of the stroke.
Carrolton - - -	Industry -	30	9	18	High	1836	W. Norris -	1½ year	
Carrolton - - -	Lafayette -	28	8	18	High	1836	W. Norris -	1 year	
Carrolton - - -	Washington -	28	8	18	High	1836	W. Norris -	9 mo.	
Carrolton - - -	New Orleans -	34	10	18	High	1837	Benj. Hick & Co.	3 mo.	This locomotive was destroyed by a fire, which burnt down the car-house of the company, on the night of Oct. 3, 1838.
Nashville and New Orleans -	–	32	10	16	High	1836	Denham & Co. -	2 years	Wheels of former, 4½ feet; of latter, 5 ft.
Nashville and New Orleans -	–	38	14	20	High	1836	Newcastle manufac.	2 years.	

J. C. LARUE, *Special agent.*

The following return does not include all the steam-engines in use in the State of Louisiana; for they are scattered over such an extent of territory, that to collect them would be impracticable in the time limited in the instructions. From the most accurate information that could be obtained, there are, in addition to those given below, about 175 used for sugar-mills, saw-mills, and cotton-gins. They are nearly all made at the same factories as those reported, and are of about the same average power. The sugar-mills and cotton-gins are used but a few months in a year, with scarcely ever an accident, and the engines are generally worked by slaves. Nearly all use cylinder boilers, and employ, on an average, 30 pounds pressure of steam to the square inch.

Return of steam-engines in use in the district of Mississippi, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Names of owners.	Diameter of cylinder.	Length of stroke.	Power of engine in horses.	For what purpose used.	Pressure.	When constructed.	Where or by whom constructed.	How long used.	Remarks.
		ft. in.	ft. in.							
Jefferson parish	Burthe - -	1 4	5	35	Saw-mill -	High	1832	West Point -	6 years.	
Do. -	Fluret - -	1 1	4	30	Do. -	Do.	–	Unknown -	–	Date could not be ascertained.
Do. -	M. Gordon, jr. -	1 2	4	31	Do. -	Do.	1831	J. Leeds -	7 do.	
Do. -	Welsh & Co. -	1 2	4	31	Do. -	Do.	1823	Cincinnati -	12 do.	
Do. -	P. & P. L. Labasse -	9	4	28	Sugar-mill -	Do.	1831	Gordon, Forstall, & Co.	6 do.	
Do. -	G. S. Dufossat -	9	3 6	26	Do. -	Do.	1830	Unknown -	8 do.	
Do. -	Sové - -	11	3 6	28	Do. -	Do.	1830	W. Tift, Cincinnati	7 do.	
Do. -	Do. - -	–	–	20	Do. -	Low	–	Fawcett & Co., Liverpool.	–	Very old, being about the first in Louisiana.
Do. -	Mrs. Holliday -	11	3 6	28	Do. -	High	1828	West Point -	10 do.	
Do. -	Minor Kenner -	1	3 6	30	Do. -	Do.	1832	W. Tift -	6 do.	

R 3—Continued.

Place.	Names of owners.	Diameter of cylinder.	Length of stroke.	Power of engine, in horses.	For what purpose used.	Pressure.	When constructed.	Where or by whom constructed.	How long used.	Remarks.
		ft. in.	ft. in.							
Jefferson parish	Minor Kenner	-	-	8	Draining machine	High	1837	West Point	1 year.	
Do.	Carrollton Railroad Co.	10	2	10	Iron manufac. &c.	Do.	1838	Hick & Co.	2 do.	Injured by fire, October 3, 1838.
St. Charles	E. Fortier & Son	11	4	28	Sugar-mill	Do.	1827	Unknown	10 do.	
Do.	Pizaro	11	4	28	Do.	Do.	1831	Pierce & Co.	7 do.	
Do.	Louis Labranche	-	-	12	Sugar, saw, & grist mill.	Low	1821	Fawcett & Co.	17 do.	
Do.	D. Labranche	-	2	10	Do.	Do.	1824	Do.	12 do.	
Do.	Octave Labranche	11	4	28	Sugar-mill	High	1830	W. Tift	8 do.	
Do.	Michel Aime	-	-	15	Do.	Low	1820	Fawcett & Co.	18 do.	
Do.	S. Henderson	10	4	27	Do.	High	1827	West Point	11 do.	
Do.	S. McCutson	11	3 6	29	Do.	Do.	1827	Do.	11 do.	
Do.	F. Trepanier	11	3 8	29	Do.	Do.	1832	Do.	6 do.	
Do.	W. J. Bruce	1	4	30	Do.	Do.	1836	Do.	2 do.	
Do.	P. A. Rost	10	3 6	26	Do.	Do.	1830	W. Tift	8 do.	
Do.	B. Lonat	10	3 6	26	Do.	Do.	1828	Do.	10 do.	
Do.	Do.	10	3 10	28	Saw-mill	Do.	1831	Do.	7 do.	
Do.	W. J. Bruce	9	3	24	Do.	Do.	1837	West Point	1 do.	
Do.	Mrs. Arnauld	10	4	27	Sugar-mill	Do.	1829	W. Tift	9 do.	
St. John Baptist	Rost, Ferret, & Slidell	10 7-8	3 9	26	Do.	Do.	1835	Do.	3 do.	
Do.	M. L. Panise	10 7-8	3 6	26	Do.	Do.	1829	Do.	9 do.	
Do.	S. Labranche	-	-	16	Do.	Do.	1820	Fawcett & Co.	18 do.	Altered from low pressure 4 years since.
Do.	A. Deslonde	1 1	3	26	Do.	Do.	1835	Fayette factory	3 do.	
Do.	E. Marmion	11	4	28	Do.	Do.	1836	W. Tift	2 do.	
Do.	Mrs. Roussel	11	4	28	Do.	Do.	1830	Do.	8 do.	
St. James	Fortier & Duplantier	-	-	20	Do.	Low	1821	Fawcett & Co.	17 do.	
Do.	R. D. Shepard	10	3 8	27	Do.	High	1835	W. Tift	3 do.	
Do.	E. Hunphreys	11	3 6	26	Do.	Do.	1828	Do.	10 do.	
Do.	Z. Trudeau & Co.	11½	3 8	29	Do.	Do.	1831	Do.	7 do.	
Do.	J. V. Mather	11½	3 8	29	Do.	Do.	1832	Do.	6 do.	

The following return does not include all the steam-engines in use in the State of Louisiana; for they are scattered over such an extent of territory, that to collect them would be impracticable in the time limited in the instructions. From the most accurate information that could be obtained, there are, in addition to those given below, about 175 used for sugar-mills, saw-mills, and cotton-gins. They are nearly all made at the same factories as those reported, and are of about the same average power. The sugar-mills and cotton-gins are used but a few months in a year, with scarcely ever an accident, and the engines are generally worked by slaves. Nearly all use cylinder boilers, and employ, on an average, 30 pounds pressure of steam to the square inch.

Return of steam-engines in use in the district of Mississippi, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Names of owners.	Diameter of cylinder.	Length of stroke.	Power of engine, in horses.	For what purpose used.	Pressure.	When constructed.	Where or by whom constructed.	How long used.	Remarks.
		ft. in.	ft. in.							
Jefferson parish	Burthe - -	1 4	5	35	Saw-mill -	High	1832	West Point -	6 years.	
Do. -	Fluret - -	1 1	4	30	Do. -	Do.	–	Unknown -	–	Date could not be ascertained.
Do. -	M. Gordon, jr. -	1 2	4	31	Do. -	Do.	1831	J. Leeds -	7 do.	
Do. -	Welsh & Co. -	1 2	4	31	Do. -	Do.	1823	Cincinnati -	12 do.	
Do. -	P. & P. L. Labasse -	9	4	28	Sugar-mill -	Do.	1831	Gordon, Forstall, & Co.	6 do.	
Do. -	G. S. Dufossat -	9	3 6	26	Do. -	Do.	1830	Unknown -	8 do.	
Do. -	Sové - -	11	3 6	28	Do. -	Do.	1830	W. Tift, Cincinnati	7 do.	
Do. -	Do. - -	–	–	20	Do. -	Low	–	Fawcett & Co., Liverpool.	–	Very old, being about the first in Louisiana.
Do. -	Mrs. Holliday -	11	3 6	28	Do. -	High	1828	West Point -	10 do.	
Do. -	Minor Kenner -	1	3 8	30	Do. -	Do.	1832	W. Tift -	6 do.	

R 3—Continued.

Place.	Names of owners.	Diameter of cylinder.	Length of stroke.	Power of engine, in horses.	For what purpose used.	Pressure.	When constructed.	Where or by whom constructed.	How long used.	Remarks.
		ft. in.	ft. in.							
Iberville -	Hynds & Craijet -	1	4 6	36	Saw & sugar-mill	High	1833	James Curry -	5 years.	
Do. -	P. Dupuy -	11	3 8	29	Sugar mill -	Do.	1835	Unknown -	8 do.	
Do. -	V. Abas -	11	4	30	Do. -	Do.	1838	J. Curry.		
Do. -	E. S. W. Butler -	11	4	30	Do. -	Do.	1830	Do. -	8 do.	
Do. -	G. C. Vaughan -	11	4	30	Saw & sugar-mill	Do.	1830	Do. -	8 do.	
Do. -	L. Andrews -	11	4	30	Sugar-mill -	Do.	1832	Do. -	5 do.	
Do. -	Love -	11	4	30	Do. -	Do.	1835	Benton & Walker -	3 do.	
Baton Rouge -	McConnelly & Nelson	11	3 8	28	Cotton-gin & grist mill.	Do.	1830	Unknown -	8 do.	
Do. -	Davenport & Co. -	9½	3 6	20	Sugar-mill -	Do.	1836	Pittsburg -	2 do.	
Do. -	J. Barker -	10	4	28	Do. -	Do.	1830	Worden & Arthurs	8 do.	
Do. -	Duplantier -	11	4	30	Do. -	Do.	1830	Harkness & Vorhies	8 do.	
Do. -	N. Stewart -	11	4	30	Do. -	Do.	1828	W. Tift -	10 do.	
Orleans -	United States -	–		40	U. States mint -	Do.	1837	Rush & Muhlenberg	1 do.	
Do. -	John Kellar -	–	–	12	Iron foundry -	Do.	1830	Richards -	8 do.	
Do. -	J. Leeds -	–	–	12	Do. -	Do.	–	J. Leeds -		
Do. -	Commercial Bank -	2	6 8	65	Water works -	Low	1835	West Point -	3 do.	
Do. -	– – –	1 4	4	36	Cotton press -	High	1838	– – –	6 m'ths	
Do. -	Lambeth & Jacobs -	1 2	4	32	Do. -	Do.	1832	West Point -	6 years.	
Do. -	B. Whitney -	9	4	24	Cotton factory -	Do.	1838	Benton & Co.		
Do. -	N. Orleans Sugar Refining Co.	11	4	30	Sugar refinery -	Do.	1830	J. Leeds -	8 do.	
Do. -	Do. -	1 4	4	36	Do. -	Do.	1834	Fawcett & Co, -	4 do.	Altered from low pressure.
Do. -	F. Vauregard -	1	4	30	Iron foundry -	Do.	1834	F. Vauregard -	4 do.	
St. Bernard -	V. Olivier -	11	4	30	Saw-mill -	Do.	1833	Goodloe & Stewart -	5 do.	

J. C. LARUE, *Special Agent.*

R 4.

Return of accidents to steamboats, with such circumstances as could be collected in relation thereto, in the district of Mississippi; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

October 10, 1835—Steamboat *Boonslick* collapsed a flue opposite Plaquemine. The boat had stopped to take in a passenger, and the collapse took place at the sixth or seventh revolution when she was getting under way. Mr. Lake, the master, Maynard, the engineer, and H. Davis, a boy, were killed. Five of the crew and four deck passengers were scalded, two of the latter severely. Size, age of boat, &c. not known.

December 8, 1835—Steamboat *Marion*, Eddy, master, was run into and sunk by the Levant, near New Orleans. Cargo, molasses, sugar, and cotton, nearly all lost. No lives sacrificed.

December 8, 1835—*Walk-in-the-Water*, 1,300 bales of cotton, burnt at the landing at Natchez. One negro burnt.

June 9, 1836—*Rob Roy*, H. Findren, master, from New Orleans to Louisville, collapsed a flue of larboard boiler. The engine had been stopped to ship the bilge pump, and the collapse took place after starting. The engineer, T. Brown, declared that when the boat started all the boilers had a sufficiency of water. It is believed that the accident was caused by defect in the iron of which the boilers were made. Three of the crew were scalded to death and four deck passengers; four of the crew and thirteen deck passengers were badly scalded, and four more of the latter slightly.

June 29, 1836—*Sampson*, from New Orleans to Louisville, took fire near New Madrid, and burnt to the water's edge. No lives lost. Value of cargo unknown.

March, 1837—*Ion*, Grice, master, from Manchester to New Orleans, with 1,100 bales cotton, took fire about fifty miles above New Orleans; she was run ashore, and most of the passengers and crew were saved. One of the clerks, five blacks belonging to the boat, and three deck passengers, were missing, and supposed to be drowned. The boat and cargo a total loss.

May 8, 1837—*Ben Sherrod*, C. G. Castleman, master, W. Bell, engineer, from New Orleans to Louisville, with cargo of merchandise and about 160 passengers, took fire in the wood pile about one o'clock in the morning, twelve miles below Natchez. The tiller ropes were burnt, and the vessel could not be run ashore. The passengers and crew jumped overboard. Most of the officers and crew were saved by the steamboat Columbus, and others; but the greater part of the passengers were lost, although the precise number cannot be ascertained, as the register of the boat was burnt. Boat and cargo a total loss. There are no means of ascertaining whether the fire arose from neglect or not.

May 23, 1837—*Swan*, Young, master, struck a snag near Red river cut-off, and sunk. No lives lost. The principal part of the cargo, engine, &c. saved, though much damaged.

August, 1837—*Caroline* burst her boiler on lake Pontchartrain. One man was killed by the explosion, and two jumped overboard and were drowned. The boilers were old, having been used in the Talma before they were put on board the Caroline.

October, 1837—*Monmouth* was run into in the night by the steamboat Warren, having in tow the ship Trenton, near Prophet island. The bows of the Monmouth were broken by the contact. She was instantly run ashore, but, before the passengers could land, she parted, and her cabin floated down stream with the passengers; 234 Creek Indians were drowned. The collision took place in the night, and is said to have been caused by the Monmouth's being out of the usual track of vessels going up stream.

December 27, 1837—*Black Hawk*, Taylor, master, burst her boilers near the mouth of Red river; killed the pilot and engineer, and wounded several others. A number of passengers were supposed to be drowned. Seven horses were killed, and a great portion of the cargo injured.

December 29, 1837—*Vicksburg*, Auber, master, took fire in the cotton near the boiler, twelve miles below Baton Rouge; she was run ashore, and the passengers saved. The boat and cargo, estimated at $100,000, a total loss.

January 23, 1838—*Marmora*, with 600 bales cotton, and *Cumberland*, were burnt at the levee in New Orleans. The *Chickasaw* was damaged. Cause of fire unknown.

March 2, 1838—*Tangipaho*, N. Sharpe, master, took fire about four miles from Briton island. She had no boats attached to her. The master, pilot, and a passenger, left the vessel on hatches for the shore, and were drowned. The mate, Mr. Grinnel, and six negroes estinguished the fire, and ran the boat ashore by means of temporary sails, and were all saved.

April, 1838—*Swan*, bilged in a storm on lake Chicot, and sunk. Cargo, 300 hogsheads sugar, lost; no lives lost.

April, 1838—*Black Hawk* struck a snag near the mouth of Red river, and sunk in three fathoms water. Cargo, cotton, part saved; the boat a total wreck.

April 21, 1838—*Oronoko*, Crawford, master, from New Orleans to Louisville, collapsed a flue while taking in passengers at Princeton. 70 deck passengers were scalded to death, drowned, or very dangerously wounded. One cabin passenger was killed, and two more so badly scalded as to die shortly after. One of the engineers, (Powers,) who died of a wound received by the accident, declared it to be no fault of his, "as there was water enough in the boilers." The boilers were very old, having been used in two boats before they were put in the Oronoko.

May 7, 1838—*Yazoo* burst a boiler off Briton island; killed one passenger with a fragment. The boilers were very old, having been used in one boat before.

The use of spirituous liquors on board of boats is universal in this trade. In all the above accidents by explosion, where the fact could be ascertained, the boilers have been old and worn out, or else made of bad iron; *and it would seem* that the danger from that source might be obviated,

by testing them two or three times a year with an hydraulic pressure of at least twice the amount of that of the steam which they would be required to carry. Boats engaged in the cotton trade are particularly liable to accidents from fire; and yet it has not been customary for them to use chains for steering, nor to carry a fire engine; both of which may be considered essential. Collisions in the night have happened for want of proper lights.

J. C. LARUE,
Special agent.

R

Return respecting steam-engines used in steamboats in the district of tary of the Treasury, to enable him to comply with a reso

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Greatest breadth.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
			ft. in.	ft. in.	ft. in.			
Baltic -	Mississippi, &c.	407	186 0	26 0	9 0	Pittsburg -	1832	Steel and Co. -
W. Wallace -	L. Pontchartrain	–	–	–	–	–	–	–
Corsair -	" -	–	–	–	–	–	–	–
†Galena -	Mississippi, &c.	107	–	–	–	Pittsburg -	1834	Unknown -
Memphis -	" -	355	155 0	26 2	9 2	Nashville -	1831	Do -
Angora -	" -	202	154 0	21 0	6 6	Gallipolis -	1837	John Mitchell -
George Collier	" -	414	163 0	28 0	9 6	Elizabethtown	1835	S. Walker -
United States	" -	338	168 9	25 4	8 3	Pittsburg -	1836	Phillips -
Teche -	" -	142	131 0	21 6	5 4	Cincinnati -	1835	Hartshorn -
Livingston -	" -	284	155 10	18 8	6 6	Madison, Ind.	1837	Unknown -
B. Borohme -	" -	187	135 0	23 6	6 3	Do -	1836	Cunningham and Kendell.
Merchant -	L. Pontchartrain	–	–	–	–	–	–	–
Levant -	Mississippi, &c.	270	145 0	25 0	8 0	Cincinnati -	1835	Leatherbury -
Manchester -	" -	105	115 0	20 9	4 6	Do -	1835	Unknown -
Swan -	" -	198	133 0	23 0	6 6	Jeffersonville	1836	W. French -
Denmark -	" -	56	96 0	20 6	5 0	Cincinnati -	1834	Unknown -
Warren -	" -	–	–	–	–	Do -	1834	B. Hazen -
‡Semaphore -	" -	106	120 0	–	–	Washington -	1835	Unknown -
Rienzi -	" -	173	145 0	21 6	6 6	Pittsburg -	1836	Phillips -
Little Red -	" -	200	169 0	23 3	–	Do -	1836	Schauss -
§Rolla -	" -	139	149 0	18 6	5 3	Elizabethtown	1837	S. Walker -
N. Alabama -	" -	–	–	–	–	Cincinnati -	1832	Weeks -
‖Gov. Shelby	" -	199	175 0	20 0	5 6	Jeffersonville	1837	French -
Pawnee -	" -	198	144 0	21 0	6 10	Pittsburg -	1835	J. M. Woods -
¶Yazoo -	" -	150	123 0	21 6	5 6	Jeffersonville	1834	French -
‡St. Louis -	" -	550	205 0	28 6	9 6	Pittsburg -	1837	Phillips -

* In all cases where the engineers declined stating the horse power, the diameter of the cylinder *and the length* of the stroke are given, as the only data by which to estimate it.

† *Boat rebuilt* in 1838; engine very old, and very bad; maker's name unknown.

‡ *Two engines.*

*ssippi; prepared in pursuance of instructions from the Secre-
y of the House of Representatives of June 29, 1838.*

s of own-ers.	Name of masters.	Name of engineers.	*Power of engine. str. ft.in.	*di.cyl. ft. in.	Pressure.	By whom constructed.	When constructed.	How long used.
–	J. Mathews	M. McCullum.	6 0	2 9½	high	Stackhouse and Thompson.	1832	6 years.
–	–	A. Dilts	6 0	2 0	do	Wilder, Tatum, & Co.	1837	18 mos.
–	–	S. Liddon	4 6	1 6	do	Stackhouse and Thompson.	1829	9 years.
& Mossey	J. W. Dough	A. Winslow	4 7	1 4½	do	Unknown	1834	4 "
Pease	J. Bradish	J. McDonald	5 6	2 3	do	Do.		
& Sanders	T. C. Filley	M. Fyke	5 0	1 11½	do	Phillips	1833	5 "
Chouteau, Jo.	J. Beltzhoover.	D. Hall	7 0	2 6	do	Stackhouse and Thompson.	1835	3 "
Hill, and	J. W. Turchell	W. Collins	7 0	2 6	do	Do.	1836	2 "
Benoit	W. Stockman.	W. Shawn	5 6	1 10½	do	J. Goodloe	1835	2 "
ls & King	Parker	Wentworth	6 0	2 0	do	Beatty & Curry	1837	1 "
ls and ier.	–	–	5 6	1 10	do	J. Arthurs [Bratt.	1836	2 "
–	Byrnes	J. Thorn	140 horse		low	Watchman and	1834	3 "
ent & Co.	C. Laurent	A. Allaire	6 0	2 7	high	Beckwell & King	1835	3 "
Fabrique	N. F. Fabrique.	M. Altic	5 0	1 5	do	Unknown	1835	3 "
, Tichnor, Jo.	R. A. Hierne, jun.	B. S. Brewster.	200 horse		do	Beatty & Curry	1836	2 "
ria & La-e S.B.Co.	Geo. Arty	–	28 horse		do	A. M. Phillips	1835	3 yr 9 m
–	John Cary	–	5 9	2 5½	do	Beckwell & King	1834	4 years.
d & Co.	D. Hutchins	–	4 0	1 1	do	Unknown	1835	3 "
Bennet, thers.	A. Q. Kennett.	J. Scott	6 8	1 10½	do	Stackhouse and Thompson.	1836	2 "
Hoffman Jo.	P. W. Kenedy.	J. Brown	6 0	1 9	do	Robinson and Minis.	1836	2 "
yer and	J. Taylor	W. E. Saltmarsh.	120 horse		do	Smith and Ervin	1837	1 "
–	J. M. Grice	J. Birmingham.	6 0	2 5½	do	Pierce & Harkess	1832	6 "
lwin, jr., Jo.	Kercheval	W. Brett	6 0	2 1	do	Gateman, Wilson, and Shields.	1837	1 "
A. Tracy Jo.	Carlisle	H. Curtis	5 6	2 1	do	Stackhouse and Thompson.	1835	3 "
	Jatham	R. Baugh	5 6	1 7	do	Unknown	1834	3 yr 9 m
White and & others.	J. C. Swan	W. Few	10 0	2 1	do	Stackhouse and Thompson.	1837	1 yr 6 m

gged and sunk on the 20th September, at island No. 25; boat and cargo total loss; one nd drowned.

since burst her conducting pipe, scalded the engineer to death, and severely scalded four sengers.

t her boiler, *(see return of accidents,* page 310;) has at present new boilers.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Greatest breadth.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.
			ft. in.	ft. in.	ft. in.			
Corvette	Mississippi, &c.	195	130 0	27 0	6 0	Cincinnati	1838	Leatherbury
Hail Columbia	"	279	158 0	22 0	8 0	Louisville	1836	Parkinson
*Alert	"	110	127 0	18 0	4 6	Pittsburg	1835	Unknown
Baton Rouge	"	241	155 0	25 0	6 9	New Albany	1836	Toulome and Haines.
*Chillicothe	"	299	163 0	26 6	7 0	Pittsburg	1837	S. Walker
Huntsville	"	339	–	–	–	Do	1835	Unknown
John Jay	"	140	138 0	19 4	5 6	Marietta	1836	Whitney
Howard	"	122	142 0	18 4	5 4	Pittsburg	1836	James May
Prairie	"	296	167 0	23 0	8 0	Do	1836	S. Walker
Tempest	"	105	124 8	18 6	5 2	Do	1835	Do
Velocipede	"	123	–	–	–	Cincinnati	1835	Unknown
*Louisville	"	500	170 0	28 0	–	Pittsburg	1837	James Woods
Bayou Sara	"	248	145 0	26 0	8 0	Cincinnati	1834	Leatherbury

* Two engines.

The season of the year, and the low stage of water in the river preventing boats from arriving, render the above return very imperfect.

Continued.

Names of owners.	Name of masters.	Name of engineers.	Power of engine. str. ft. in.	Power of engine. di. cyl. ft. in.	Pressure.	By whom constructed.	When constructed.	How long used.
Johnson & Haggerty.	S. Johnson	J. Tull	7 0	2 0	high	Wilson, Shields, and Co.	1838	3 mos.
Barlow, Sprague, and Co.	J. Miller	G. Knuckle	6 0	2 2½	do	Smith & Minis	1836	2 years.
Long and Grivot	–	–	6 0	1 3	do	Do	1835	3 "
Starr, Turner, & others.	J. Irvin	W.E.Thomson.	6 0	2 4	do	Benton & Walker	1836	2 "
R. Baldwin, jr., and Co.	Carlisle	C. Bellehan	7 0	1 5	do	Robinson, Minis, and Co.	1837	1 "
–	–	J.Armstrong	5 6	2 4½	do	Graham & Coon	1835	3 "
Bennet, Merle, & Co.	H. Mason	R. Kendall	5 6	1 10	do	A. M. Phillips	1836	1 yr 9 m
Sproule, Agnew, & Co.	G. F. Dunnica.	J. Howe	5 0	1 9½	do	Smith & Irvin	1836	2 yr 3 m
McGunnegle and Way, & others.	J. H. Freleigh.	E. Gower	6 4	2 2	do	J. Arthurs	1836	2 yr 4 m
H. Penny	H. Penny	J. Worth	5 0	1 7½	do	Smith & Minis	1835	2 yr 9 m
Wright, Dalman, and Woods.	P. Dalman	J. Marsh	5 0	1 11	do	J. Goodloe	1835	3 years.
Collier, Peters, & and Co.	M. J. Easton	J. Smith	8 0	1 10½	do	McClung, Wade, and Co.	1837	1 yr 8 m
J. G. Bell	J. Bradish	J. Garson	5 6	3 7½	do	Beckwell & King	1833	5 years.

J. C. LARUE,
Special agent.

R

Return respecting steam-engines used in steamboats in the district of St. Louis; him to comply with a resolution of the

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part, in feet & inches.	Depth from spar-deck to keel, in feet & inches.	Where built.	When built.	By whom built.
			Ft. in.					
Pawnee	New Orleans trade.	198	144 0	21 0	8 2	Pittsburg	1835	T. Dunnica
Alton	Do.	309	161 0	24 0	8 2	Do.	1836	J. Simonds
Vandalia	Do.	298	167 0	24 0	8 0	Marietta	1836	J. Small
Geo. Collier	Do.	402	178 0	26 2	9 0	Pittsburg	1835	Geo. Taylor
St. Louis	Do.	538	220 0	28 0	9 0	Do.	1837	J. C. Swan
Madison	Do.	322	165 0	25 0	8 2	Do.	1835	A. Scott
Selma	Do.	355	172 0	25 4	8 6	Do.	1835	J. C. Swan
Rienzi	Do.	173	162 0	19 6	5 9	Do.	1836	J. Woods
Prairie	Do.	296	167 0	23 0	8 0	Do.	1836	J. Sellers
Louisville	Do.	307	171 0	23 0	8 0	Do.	1837	J. Wood
Little Red	Do.	201	158 0	22 0	6 0	–	1837	J. Gunsalis
Clyde	Do.	193	147 0	20 0	7 0	Cincinnati	1836	—— Evans
Mogul	Do.	414	175 0	26 0	10 6	Pittsburg	1834	J. Hunt
United States	Do.	338	168 9	25 4	8 3	Do.	1836	J. Hart
Majestic	Do.	323	168 0	25 0	8 0	Do.	1834	J. Wood
Knickerbocker	Galena trade	169	153 0	23 0	5 0	Do.	1838	J. Vanhouten
Burlington	Do.	200	150 0	23 0	6 0	–	1837	J. Throckmorton
Ariel	Do.	95	125 0	17 6	4 6	Do.	1837	J. Throckmorton
Bee	Do.	105	108 3	17 0	5 0	Do.	1836	S. McKee
Gipsey	Do.	79	125 0	16 0	4 6	Do.	1836	O. Reynolds
Wisconsin	Do.	87	121 0	16 9	4 6	Do.	1834	J. May
St. Peter's	Do.	119	139 0	18 8	5 9	Do.	1836	J. Throckmorton
Wilmington	Missouri trade	206	159 0	22 6	6 0	Cincinnati	1837	J. White
Pirate	Do.	128	137 0	19 6	5 0	Pittsburg	1837	J. Moore
Howard	Do.	122	142 0	18 4	5 4	Do.	1836	N. Patterson
Astoria	Do.	148	140 0	20 0	5 6	Cincinnati	1837	E. Price
Belle of Misso.	Do.	201	158 0	22 0	6 0	Pittsburg	1837	J. Shalcross
Dart	Do.	113	131 0	18 0	5 0	Do.	1836	—— Cleveland
Antelope	Do.	132	132 0	19 0	5 6	Louisville	1838	—— Swager
Kansas	Do.	111	130 0	18 0	5 0	Pittsburg	1836	M. Littleton
Quincy	Galena trade	117	142 0	17 4	5 0	–	1836	J. May
Pavilion	Do.	105	124 0	18 0	4 6	Do.	1836	O. Smith
Brazil	Do.	194	162 0	22 0	5 6	Cincinnati	1838	P. Lehouteau
Desmoine	Do.	93	123 0	17 6	4 6	Pittsburg	1838	G. B. Cole
Relief	Do.	78	118 0	17 6	4 0	Cincinnati	1838	D. S. Harris
Chariton	Illinois trade	112	130 0	17 11	5 0	Pittsburg	1835	W. Littleton
Ark	Do.	77	109 0	17 0	4 0	St. Louis	1836	B. Meachum
Hero	Do.	89	116 3	16 11	4 9	Bridgeport	1834	W. Patterson
Adventure	Do.	60	–	–	–	Pittsburg	1835	J. & W. Finney
Malta	Do.	82	115 0	17 0	4 6	Cincinnati	1836	P. J. Boutie
Eagle	Do.	46	66 0	16 0	4 0	St. Louis	1838	J. Thomas
Platte	Missouri trade	158	137 0	22 0	5 6	Pittsburg	1838	J. Moore

The above is a list of all the boats now in use, belonging to and owned at this port. Several *boats have been* lost, and some have gone out of service since 30th September, and, of course *we not* embraced in this list.

In making out a statement of boats to which accidents had happened, I mentioned several

ired in pursuance of instructions from the Secretary of the Treasury, to enable se of Representatives of June 29, 1838.

s of owners.	Names of masters or commanders.	Names of engineers.	Power of engines in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
A. Tracy	T. Dunnica	H. Curtis	Our engineers have no general rule to calculate horse-power.	High	Arthur & Co.	1835	3 years.
ll & Lomart	F. L. Ridgly	E. Crow		High	Do.	1836	2 y'rs 8 mo.
ilman & Co.	J. P. Durst	A. Wineland		High		1836	2 y'rs 8 mo.
E. Walsh	Geo. Taylor	D. Hall		High	J. Worden & Co.	1835	3 years.
Swan	J. C. Swan	W. Few		High	J. Thompson & Co.	1837	1 y'r 8 mo.
cott	J. Woods	— Perkins		High	Do.	1835	2 y'rs 9 mo.
ood	S. Blood	J. Bowman		High	Do.	1835	3 years.
White & Co.	A. S. Kennett	—Richardson		High	Litch & Co.	1836	2 years.
W. Finney	J. H. Freleigh	E. Gour		High	Robinson & Co.	1836	2 y'rs 6 mo.
Colliar	N. J. Eaton	J. Smith		High	Stackhouse & Co.	1837	1 y'r 6 mo.
. Hoffinan	P. A. Canaday	— Curtis		High	Do.	1837	1 y'r 4 mo.
ullikin	W. Cable	J. Hine		High	Do.	1836	2 y'rs 6 mo.
Hempstead	J. Simonds	— Smith		High	L. McClung & Co.	1834	4 years.
White & Co.	Jas. Hill	— Collins		High	J. Arthur & Co.	1836	2 years.
Swan	J. Hunt	— Roberts		High	Do.	1834	4 y'rs 6 mo.
McGunnigle	J. Vanhouten	— Thompson		High	J. Thompson & Co.	1838	1 y'r 3 mo.
eeler	J. Throckmorton	— Saltmarsh		High	Do.	1837	1 y'r 5 mo.
eeler	—— Lyon	— Grant		High	Do.	1837	1 y'r 8 mo.
W. Finney	O. S. Burnham	–		High	Litch & Co.	1836	2 y'rs 8 mo.
Valsh	W. Gray	–		High	Stackhouse & Co.	1836	2 y'rs 4 mo.
ay	—— Graham	–		High	Do.	1834	4 y'rs 6 mo.
eeler	J. Kizer	— Dorsey		High	J. Arthur & Co.	1836	2 y'rs 6 mo.
Glasgow	R. Freeland	–		High	Harkness & Borus	1837	1 y'r 6 mo.
ollfar	J. Miller	–		High	Robinson & Co.	1837	1 y'r 4 mo.
Glasgow	W. Dunnica	L. How		High	Do.	1836	2 y'rs 4 mo.
rice	—— McCord	–		High	Not known	1832	Eng. 6 y'rs, boat 18 mo.
H. Tracy	J. Shalcross	— Dunnica		High	Stackhouse & Co.	1837	1 y'r 7 mo.
H. Tracy	J. Robinson	–		High	Do.	1836	2 y'rs 7 mo.
houteau	N. Cameron	–		High	Not known	1838	7 months.
Spraile	M. Littleton	–		High	Arthur & Co.	1836	2 y'rs 7 mo.
. McGill	J. Lusk	–		High	Do.	1836	2 y'rs 7 mo.
Comstock	W. Phelps	–		High	Do.	1836	2 y'rs 8 mo.
Smith	O. Smith	–		High	Harkness & Borus	1838	7 months.
Colliar	G. B. Cole	–		High	Arthur & Co.	1838	8 months.
. Harris	R. S. Harris	–		High	Harkness & Borus	1838	7 months.
ell & Lindly	A. B. Dewit	–		High	Arthur & Co.	1835	3 y'rs 7 mo.
Meachum	W. Grapevine	–		High	Gaty & Coovee	1836	2 y'rs 9 mo.
Patterson	—— Shaw	–		High	Unknown	1834	4 y'rs 7 mo.
McGunnigle	J. W. Wineland	–		High	Do.	1835	3 y'rs 7 mo.
Grant	D. Grant	–		High	Do.	1836	2 y'rs 8 mo.
D. Page	J. Cooper	–		High	Gaty & Coovee	1838	7 months.
. Colliar	J. Moore	–		High	J. Thompson & Co.	1838	8 months.

belonging here, some of which were lost many years ago. I did so for the reason that I was ious to communicate all the information I had obtained on that subject.

N. RANNEY,
Surveyor, &c. port of St. Louis.

OVEMBER 23, 1838.

R 7.

Return respecting steam engines used in steamboats in the district of Louisville, on the 1st of September, 1838; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Tons.	Length from stern to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of masters or commanders.	High or low pressure.	When engine constructed.	How long in use.
		ft. in.	ft. in.	ft. in.							
Argo	85	105 0	16 0	4 6	Louisville	1832	French	Lodwick	High	1831	About 7 years.
Angora	202	154 0	21 0	6 6	Gallipolis	1837	–	Tarlton	Do.	1831	About 7 years.
Chillicothe	300	167 0	25 0	6 6	Pittsburg	1837	–	Carlisle	Do.	1837	1 year.
Chancellor	423	168 6	27 0	10 2	Do.	1832	–	Shalcross	Do.	1832	6 years.
Diana	280	170 0	23 0	7 0	Louisville	1838	Do.	Carter	Do.	1838	
Dover	80	127 0	17 6	4 0	Pittsburg	1835	–	Bernard	Do.	1835	3 years.
Empress	200	177 0	21 0	6 8	Louisville	1837	Do.	Russell	Do.	1837	1 year.
Fox	102	129 0	18 0	5 0	Wheeling	1836-7	–	Burch	Do.	1836-7	Near 2 years.
General Brown	195	160 0	21 6	6 6	Louisville	1836	Do.	Clark	Do.	1836	2 years.
General Gaines	195	160 0	21 0	6 0	Do.	1836	Do.	Boggs	Do.	1836	2 years.
Governor Clark	146	130 0	18 6	6 0	Do.	1835	Ferguson	Reid	Do.	1835	3 years.
Governor Shelby	200	165 0	20 3	6 0	Do.	1836-7	French	Kercheval	Do.	1836-7	2 years.
Hannibal	136	105 0	23 0	5 4	Do.	1837	Cunningham	Payne	Do.	1837	1 year.
Houma	160	125 0	26 0	6 0	Wheeling	1838	–	Lloyd	Do.	1838	8 months.
Henry Clay	424	175 0	29 0	8 10	Pittsburg	1831-2	–	–	Do.	1831-2	Nearly 8 years.
Homer	410	170 0	30 0	9 6	Louisville	1832	Telone	Carroll	Do.	1832	6 years.
Hudson	145	138 0	19 0	6 0	Marietta	1836	–	Dustin	Do.	1836	2 years.
Invincible	210	153 0	22 6	6 6	Gallipolis	1836	–	Smith	Do.	1836	2 years.
Lady Morgan	59	115 0	17 6	4 0	Pittsburg	1838	–	Dobbin	Do.	1838	New boat.
Lady Marshall	99	115 0	18 6	5 6	Cincinnati	1833-4	–	–	Do.	1833-4	5 years.
[redacted]	127	130 0	22 4	5 0	Louisville	1837	Cunningham	Laughlin	Do.	1832	6 years.

[redacted]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Pittsburg	1838	—	Smoker	Do.	1836	2 years.
New Albany	149	150 0	25 0	6 0	Louisville	1837	Telone	Montgomery	Do.	1837	1 year.
North America	445	155 0	28 6	10 0	Cincinnati	1836	Hartshorn	—	Do.	1836	2 years.
Othello	85	100 0	17 0	4 6	Elizabethtown, Pa.	1837	—	Belwood	Do.	1837	1 year.
Otsego	95	112 0	17 0	5 0	Evansville, Indiana	1835	—	—	Do.	1835	3 years.
Pekin	104	110 0	17 0	5 0	Pittsburg	1838	—	Scantland	Do.	1838	Nearly 1 year.
Rio	122	120 0	21 0	5 0	Louisville	1838	Telone	Paxton	Do.	1838	Nearly 1 year.
Rover	55	115 0	17 0	3 6	Pittsburg	1835	—	Wayman	Do.	1835	3 years.
Rudolph	150	135 0	20 6	5 8	Louisville	1836	French	Ryan	Do.	1836	2 years.
Robert Morris	123	135 0	20 0	5 6	Pittsburg	1835	—	Massey	Do.	1835	3 years.
Shakspeare	227	145 0	22 8	7 2	Louisville	1835	Telone	Waring	Do.	1835	3 years.
St. Lawrence	111	120 0	18 0	5 9	Steubenville	1835	—	—	Do.	1835	3 years.
Sultana	385	190 0	27 0	8 6	Cincinnati	1836	Gordon	Tufts	Do.	1836	2 years.
Tennessee	86	120 0	17 6	4 6	Bridgport	1836	—	Cocke	Do.	1836	2 years.
Tuscarora	287	165 0	23 6	8 0	Cincinnati	1832	Do.	—	Do.	1830	8 years.
Tuscumbia	82	115 0	17 6	4 6	Marietta	1835	—	Simpson	Do.	1835	3 years.
William French	265	163 0	25 0	7 0	Louisville	1838	French	Reid	Do.	1838	New boat.

Where employed.—Boats of 200 tons and upwards run mainly between New Orleans, Louisville, and Cincinnati; but perhaps not a single one is confined to any special trade. All are governed in the business to which they may be put by the season and the stage of the waters. They go to any point on the Western and Southwestern waters, as the interest of the owners may seem to dictate.

Names of owners.—Boats change owners so frequently, and there are so many to each boat, that no correct data could be afforded by an attempt to fill this column.

Power of engine.—The estimation of horse-power is altogether arbitrary; but about 30-horse power may be allowed to each 100 tons of measurement. The boilers are all cylinder, some with 2, and some 1 flue. Large boats—8 boilers, 24 feet by 44 inches; 2 flues, 16-inch; cylinder, 30 inches; 7-feet stroke to 8. Small boats—2 boilers, 20 feet by 16 inches, 4½ to 5 stroke.

Names of engineers.—Engineers are changing almost every trip; it is thought useless, therefore, to make any attempt to fill this column.

By whom engine constructed.—Cannot be known, except so partially as to be of no use.

In the column "*where built,*" boats built at Louisville and vicinity are put down as having been built at Louisville. There is a practice in all the boats on the Western and Southwestern waters of serving out to the crews intoxicating liquors; there is not believed to be a single exception.

ACCIDENTS.—Two steam ferry-boats have exploded in this district, by which 8 lives were lost, and many wounded. A mail-boat *for Cincinnati*, on starting from the wharf of this city, exploded; killed 3 persons, wounded 6. A steam saw-mill's (in this city) boiler exploded; killed 3 persons, and wounded 5 or 6. In every case not sufficient water in the boilers, and too much weight on the safety-valve.

Return of steam-engines used on railroads in the district of Louisville, on the 1st of September, 1838; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Lexington and Ohio -	Nottoway - -	10	High -	1836	John Bull - -	2 years, in Kentucky.	Made in England.
Do. -	Elkhorn - -	10	High -	1836	Do - -		

This district being so extensive, including the States of Kentucky, Indiana, and part of Illinois, and the boundaries not defined, it is impossible to afford any satisfactory information respecting all the steam-engines in use in the district of Louisville, exclusive of those used in steamboats and on railroads.

R 8.

List of the number of engines built in the city of Louisville, by the different persons employed in that line of business, from the commencement of building engines in the city, up to the present date, December 1, 1838; carefully taken from the books and papers of contracts at each establishment—amounting, in all, to 244 engines.

Diameter of the cylinder.	Length of stroke of the cylinder.	Length of the boilers.	Diameter of the boilers.	Number of boilers.	Number of flues in each boiler.	Thickness of iron used in making the boilers.	High or low pressure.	For what purpose engine used.
in.	ft. in.	ft.	ft. in.			in.		
12	4 –	12	4 –	1	3	3-16	low	Cotton factory.
20	4 –	13	6 –	1	3	3-16	low	Boat.
18	4 –	18	2 –	2	2	1-4	high	Boat.
20	5 –	20	2 –	3	1	1-4	low	Mill to saw and grind.
20	4 –	20	4 –	2	3	1-4	low	Boat.
12	3 –	15	3 –	1	3	1-4	high	Boat.
11	2 –	18	3 –	1	1	1-4	high	Mill.
18	4 –	18	2 –	2	1	1-4	high	Boat.
12	4 –	20	2 –	2	1	1-4	high	Boat.
18	4 –	20	2 –	3	1	1-4	high	Boat.
10	3 –	20	2 –	2	–	1-4	high	Mill.
20	5 –	20	4 –	1	3	1-4	low	Boat.
16	4 –	18	2 –	2	2	3-16	high	Boat.
12	4 –	20	3 –	1	2	1-4	high	Boat.
20	6 –	20	4 –	2	3	1-4	low	Boat.
20	5 –	18	3 –	2	2	1-4	low	Boat.
19	4 6	18	2 –	3	1	1-4	high	Boat.
15	5 –	18	2 2	3	1	1-4	high	Boat.
14	3 6	20	2 –	2	1	1-4	high	Boat.
18	4 –	19	2 2	2	1	1-4	low	Boat.
19	4 9	20	4 –	1	3	1-4	high	Boat.
10	3 –	18	2 –	1	2	1-4	high	Boat.
20	5 –	18	2 6	5	1	1-4	high	Boat.
12	4 –	24	2 –	2	–	1-4	high	Mill.
10	4 –	20	2 –	2	–	1-4	high	Mill.
8½	3 –	20	3 –	1	–	1-4	high	Mill.
3	1 6	15	1 8	1	–	1-4	high	To drive turning lathes.
8	3 –	15	2 –	2	1	1-4	high	For a ferry-boat.
8	3 –							
12	4 6	18	2 6	3	–	3-16	high	For mill to saw.
10	4 –	20	2 6	2	–	1-4	high	Saw mill.
20½	5 –	17	2 6	4	1	1-4	high	Boat.
18	5 –	18	2 6	3	1	1-4	high	Boat.
30	6 6	23	2 7	8	1	1-4	high	Boat.
23	5 –	20	2 6	5	1	1-4	high	Boat.
13	4 6	20	2 2	3	–	1-4	high	Mill.
16	4 6	22	2 6	4	–	1-4	high	Flouring mill.
6	2 6	20	2 –	1	–	1-4	high	Mill.
12	4 –	19	2 –	3	–	1-4	high	Mill.
12	4 –	19	2 –	3	–	1-4	high	Mill.
12	4 –	19	2 –	3	1	1-4	high	For ferry-boat.
10	3 6	20	2 –	2	–	1-4	high	Mill.
12	4 –	20	2 –	3	–	1-4	high	Flouring mill.

Doc. No. 21.

R 8—Continued.

Date when made.	Diameter of the cylinder.	Length of stroke of the cylinder.	Length of the boilers.	Diameter of the boilers.	Number of boilers.	Number of flues in each boiler.	Thickness of iron used in making the boilers.	High or low pressure.	For what purpose engin
	in.	ft. in.	ft.	ft. in.			in.		
1832	19	4 6	20	3 4	2	2	1-4	high	Boat.
1832	20	5 –	17	3 –	4	1	3-16	high	Boat.
1832	12	4 6	20	2 4	3	–	1-4	high	To blow a furnace.
1832	10	4 –	18	2 6	2	–	1-4	high	Saw mill.
1832	16	4 –	22	2 6	4	–	1-4	high	To saw and grinding mi
1832	12	4 6	22	2 6	2	–	1-4	high	For a sugar mill.
1832	8	3 6	18	2 –	2	–	1-4	high	For a corn mill.
1832	18	5 6	18	3 2	3	2	1-4	high	Boat.
1832	12	4 9	22	2 6	2	–	3-16	high	For a sugar mill.
1832	12	4 6	18	2 2	3	–	3-16	high	For saw mill.
1832	12	4 6	20	2 2	3	–	1-4	high	Flouring mill.
1832	12	4 6	20	2 2	3	–	3-16	high	Sugar mill.
1832	12	5 9	22	2 –	2	–	1-4	high	Sugar mill.
1832	10	4 –	20	2 2	2	–	1-4	high	Saw mill.
1832	10	4 –	19	2 6	2	–	1-4	high	Oil mill.
1832	11	4 –	20	2 6	2	–	1-4	high	Corn mill.
1832	9	3 6	19	2 2	2	–	1-4	high	Saw mill.
1832	8	3 6	14	2 4	2	–	3-16	high	Saw mill and to grind.
1832	8	3 –	18	2 6	1	2	1-4	high	For a ferry-boat.
1833	12	4 6	20	2 6	3	–	3-16	high	To saw and grind.
1833	12	4 6	24	2 2	2	–	3-16	high	Flouring mill.
1833	18	4 6	20	2 6	3	1	3-16	high	Flouring mill.
1833	10	3 6	20	2 6	2	–	1-4	high	Corn mill.
1833	12	4 –	20	2 6	3	–	3-16	high	Cotton seed oil mill.
1833	12	4 –	20	2 6	2	1	1-4	high	Boat.
1833	18	4 6	17	3 1	3	1	1-4	high	Boat.
1833	12	3 6	17	3 –	2	–	1-4	high	Mill.
1833	8	2 –	20	2 –	2	–	1-4	high	Saw mill.
1833	8	3 –	21	2 7	1	–	1-4	high	Saw mill.
1833	8	3 –	21	3 1	1	–	1-4	high	Saw mill.
1833	12	4 –	24	2 6	2	–	3-16	high	Saw and grist mill.
1833	14	4 –	24	2 6	3	2	1-4	high	Boat.
1833	8	3 6	15	3 –	1	–	3-16	high	Saw mill.
1833	8	3 –	18	2 2	2	–	1-4	high	Saw mill.
1833	6	2 6	18	2 –	1	–	1-4	high	Corn mill to a distillery
1833	6	2 6	18	2 –	1	1	1-4	high	Bark mill.
1833	5	1 10	18	2 –	1	1	3-16	high	Oil mill.
1834	6	2 –	18	2 2	1	–	1-4	high	For pumping water (st
1834	8	3 –	8	2 2	2	1	1-4	high	For pumping water.
1834	12	4 –	24	2 –	2	–	1-4	high	Saw mill.
1834	16	4 –	22	2 6	4	–	3-16	high	For a flouring mill.
1834	8	3 –	18	2 –	2	–	1-4	high	Saw mill.
1834	10	4 –	20	2 6	2	–	1-4	high	Saw mill.
1834	10	3 6	20	2 2	3	–	3-16	high	Grist mill.
1834	10	4 –	20	2 2	3	–	3-16	high	Saw mill.
1834	11	2 6	18	3 4	1	2	1-4	high	Boat.
1834	18	4 6	30	1 8	4	–	1-4	high	For a clay mill.
1834	22	5 –	20	3 –	5	2	1-4	high	Boat.
1834	13	4 –	16	2 8	3	2	1-4	high	Boat.
1834	8	3 6	20	3 –	1	2	1-4	high	Mill.

R 8—Continued.

Diameter of the cylinder.	Length of stroke of the cylinder.	Length of the boilers.	Diameter of the boilers.	Number of boilers.	Number of flues in each boiler.	Thickness of iron used in making the boilers.	High or low pressure.	For what purpose engine used.
in.	ft. in.	ft.	ft. in.			in.		
20	5 –	18	3 4	3	2	1-4	high	Boat.
18	5 –	20	3 6	2	2	1-4	high	Boat.
21½	5 –	20	3 4	3	2	1-4	high	Boat.
3	1 –	4	1 6	1	1	3-16	high	Driving lathes.
11½	3 –	22	2 6	2	–	1-4	high	Mill to saw.
12	3 6	17	3 –	2	1	1-4	high	Boat.
8½	3 –	16	2 2	2	–	1-4	high	Mill.
12	4 –	24	2 6	2	–	1-4	high	Flouring mill.
8	3 6	16	2 2	2	–	1-4	high	Sawing and grinding.
10	4 –	18	2 6	2	–	1-4	high	Saw mill.
8	3 6	18	2 2	2	–	1-4	high	Corn mill and sawing.
8	3 6	18	2 2	2	–	1-4	high	Saw mill.
8	3 6	20	3 4	1	2	1-4	high	Planing mill.
8	3 6	18	2 2	2	–	1-4	high	Sawing mill.
10	4 –	20	2 2	3	–	3-16	high	Saw mill.
15	4 6	18	2 2	2	2	1-4	high	Boat.
8	3 –	20	2 6	1	2	1-4	high	Mill to saw.
11	4 –	18	2 6	2	1	1-4	high	Boat.
18	5 –	18	3 6	2	2	1-4	high	Boat.
3	1 8	15	1 8	1	–	1-4	high	To drive machinery.
6	2 –	18	1 6	2	–	1-4	high	To break stone on a turnpike.
6	2 –	18	2 –	1	–	1-4	high	For a machine shop.
8	3 6	18	2 2	2	–	3-16	high	For corn mill.
6½	2 6	18	2 6	1	–	3-16	high	Saw mill.
6	2 6	18	2 6	1	–	1-4	high	Saw mill.
9	4 –	20	2 –	2	1	1-4	high	Boat.
8	3 –	20	2 2	2	–	1-4	high	Flouring mill and sawing.
17	4 –	20	3 4	2	2	1-4	high	Boat.
8	3 –	20	2 2	2	–	1-4	high	For foundry.
8½	3 6	20	2 6	2	–	1-4	high	Saw mill.
12	3 6	20	2 –	2	–	1-4	high	Flouring mill.
12	4 –	20	2 –	3	–	1-4	high	Saw and grist mill.
8	3 –	20	2 –	2	–	1-4	high	Bark mill.
10	4 –	20	2 –	2	–	1-4	high	Mill.
7	2 10	20	2 –	2	–	1-4	high	Saw mill.
26	6 –	20	3 4	5	2	1-4	high	Boat.
20	5 –	18	3 –	4	1	1-4	high	Boat.
21	6 –	20	3 –	5	1	1-4	high	Boat.
18	5 –	18	3 –	3	2	1-4	high	Boat.
14	5 6	21	2 2	3	1	1-4	high	Saw mill.
9	4 –	24	2 2	2	–	1-4	high	Saw mill.
22	5 –	20	3 6	3	2	1-4	high	Boat.
26	6 –	22	3 6	4	2	1-4	high	Boat.
18	5 –	20	3 1	3	1	1-4	high	Boat.
30	6 –	22	3 6	6	2	1-4	high	Boat.
26	6 –	21	3 4	3	2	1-4	high	Boat.
28	7 –	24	3 6	4	2	1-4	high	Boat.
23	7 –	24	3 6	3	2	1-4	high	Boat.
23	6 –	24	3 6	3	2	1-4	high	Boat.
23	6 –	22	3 6	3	2	1-4	high	Boat.

R 8—Continued.

Date when made.	Diameter of the cylinder.	Length of stroke of the cylinder.	Length of the boilers.	Diameter of the boilers.	Number of boilers.	Number of flues in each boiler.	Thickness of iron used in making the boilers.	High or low pressure.	For what purpose er
	in.	ft. in.	ft.	ft. in.			in.		
1837	10	3 6	20	2 2	3	–	1-4	high	Sugar mill.
1837	8	3 –	18	2 2	2	–	1-4	high	Sugar mill.
1837	18	6 –	20	3 4	2	2	1-4	high	Boat.
1837	18	7 –	18	3 4	4	2	1-4	high	Boat.
1837	18	7 –	18	3 4	4	2	1-4	high	Mill to saw.
1837	10	4 –	20	2 –	2	–	1-4	high	Saw mill.
1837	10	4 –	18	2 –	2	–	1-4	high	Saw mill.
1837	10	3 10	18	2 2	2	–	3-16	high	Saw mill.
1837	10	4 6	21	2 2	2	–	3-16	high	Saw and grind.
1837	5	2 6	20	2 –	1	–	1-4	high	Saw mill.
1837	8	3 –	24	2 –	1	–	1-4	high	Corn mill.
1837	8	3 –	24	2 –	2	–	1-4	high	Saw mill.
1837	12	4 –	20	2 2	2	–	1-4	high	Flouring mill.
1837	18	4 6	20	3 2	3	–	1-4	high	Mill.
1837	8	2 –	20	2 6	2	–	3-16	high	Mill.
1837	12	4 6	17	2 6	2	–	3-16	high	Mill.
1837	12	4 6	20	2 6	2	–	1-4	high	Mill.
1837	12	4 6	20	2 6	2	–	1-4	high	Mill.
1837	14	3 6	20	2 6	2	1	1-4	high	Mill.
1838	10	3 6	20	3 –	1	–	1-4	high	Mill.
1838	30	8 –	22	3 6	6	2	1-4	high	Boat.
1838	30	8 –	22	3 6	6	2	1-4	high	Boat.
1838	26	8 –	24	3 6	7	2	1-4	high	Boat.
1838	26	8 –	24	3 6	7	2	1-4	high	Boat.
1838	8	3 6	20	2 6	2	–	1-4	high	Mill.
1838	10	3 6	20	2 2	3	–	1-4	high	Mill.
1838	14	4 –	20	2 8	3	–	1-4	high	Mill.
1838	8	3 6	20	2 –	2	–	1-4	high	Mill.
1838	14	4 6	20	2 6	3	–	1-4	high	Mill.
1838	18	4 6	20	2 2	3	–	1-4	high	Mill.
1838	6	2 –	20	2 2	1	–	1-4	high	Mill.
1838	8	3 –	24	2 6	1	–	1-4	high	Mill.
1838	12	4 –	22	2 6	2	–	1-4	high	Mill.
1835	8	3 –	20	2 –	2	–	1-4	high	Mill.
1835	10	4 –	20	2 6	2	–	1-4	high	Mill.
1835	10	3 6	22	2 –	2	–	1-4	high	Mill.
1835	8	3 –	24	2 –	2	–	1-4	high	Mill.
1835	8	3 6	24	2 –	2	–	1-4	high	Mill.
1835	6	2 6	20	2 –	1	–	1-4	high	Mill.
1834	20	5 6	20	3 –	5	1	1-4	high	Boat.
1838	9	3 6	20	3 –	1	2	1-4	high	Mill in Texas.
1838	8	3 –	20	2 –	2	–	1-4	high	For a blast furnace.
1835	6	2 6	22	2 –	1	–	1-4	high	Mill to grind mud.
1835	5	2 –	20	2 –	1	–	1-4	high	Mill.
1835	5	2 –	20	2 –	1	–	1-4	high	Mill.
1835	8	3 –	22	2 –	2	–	1-4	high	Mill.
1835	10	3 6	20	2 6	2	–	1-4	high	Saw-mill.
1836	9	3 6	21	2 6	2	1	1-4	high	Corn mill.
1836	9	3 6	21	2 2	2	–	1-4	high	Saw mill.
1836	8	3 –	20	2 2	2	–	1-4	high	Oil mill.

R 8—Continued.

	Diameter of the cylinder.	Length of stroke of the cylinder.	Length of the boilers.	Diameter of the boilers.	Number of boilers.	Number of flues in each boiler.	Thickness of iron used in making the boilers.	High or low pressure.	For what purpose engine used.
	in.	ft. in.	ft.	ft. in.			in.		
6	7	3 –	20	2 –	1	–	3-16	high	Mill.
6	20	4 6	18	3 –	3	1	1-4	high	Mill.
6	14	4 –	21	3 –	3	–	1-4	high	Sugar mill.
6	12	4 –	20	2 6	3	–	1-4	high	Sugar mill.
6	11	4 –	20	2 –	2	–	1-4	high	Mill.
6	11	4 6	20	2 –	2	–	3-16	high	Mill.
6	18	5 –	20	2 6	4	1	1-4	high	Flouring mill.
6	19	5 –	24	2 6	3	–	3-16	high	Flouring mill.
6	16	5 –	20	2 6	3	–	1-4	high	Flouring mill.
7	6	3 –	20	2 –	1	–	3-16	high	Distillery corn mill.
7	15	4 –	20	2 10	2	1	3-16	high	Saw and grist mill.
7	12	4 –	22	2 6	2	–	3-16	high	Saw mill.
7	19	5 6	20	2 6	3	1	3-16	high	Flour mill.
7	8	3 –	20	2 –	2	–	3-16	high	Saw mill.
7	8	3 –	20	2 –	2	–	1-4	high	Saw mill.
7	7	2 6	20	2 –	1	–	1-4	high	Saw mill.
7	7	2 6	19	2 10	1	–	1-4	high	Saw mill.
7	10	3 6	20	2 –	2	–	1-4	high	Mill.
7	10	4 –	20	2 –	2	–	1-4	high	Mill.
7	10	3 6	20	2 6	2	–	1-4	high	Mill.
7	9	3 –	20	2 6	2	–	1-4	high	Saw mill.
7	20	5 –	23	3 –	3	1	3-16	high	Flour mill.
8	18	4 6	22	3 –	3	–	1-4	high	Flour mill.
8	12	4 –	20	2 2	2	–	3-16	high	Flour mill.
8	14	4 –	20	2 6	3	1	3-16	high	Flour mill.
8	9	3 10	21	2 –	2	–	3-16	high	Saw mill.
8	8	3 10	20	2 –	1	–	1-4	high	Saw mill.
8	8	3 10	20	2 –	2	–	1-4	high	Saw mill.
8	8	3 6	20	2 6	2	–	1-4	high	Mill.
8	10	4 –	21	2 6	3	–	1-4	high	Saw mill.
8	16	4 6	20	3 –	3	–	1-4	high	Flour mill.
8	18	4 6	18	3 –	4	–	1-4	high	Flour mill.
8	14	3 10	20	3 –	3	–	1-4	high	Flour mill.
8	11	3 10	20	2 6	2	–	1-4	high	Sugar mill.
8	11	3 10	20	2 6	2	–	1-4	high	Gin mill.
8	9	3 6	20	2 2	2	–	3-16	high	Gin mill.
8	8	3 6	20	2 6	2	–	3-16	high	Saw mill.
8	6	2 6	20	2 –	1	–	3-16	high	Mill.
8	8	3 –	20	2 –	2	–	1-4	high	Saw mill.
8	8	3 –	18	2 –	2	–	1-4	high	Saw mill.
8	8	3 –	18	2 –	2	–	1-4	high	Gin mill.
8	9	4 –	20	2 –	2	–	1-4	high	Saw mill.
8	10	4 –	24	2 6	3	–	1-4	high	Saw mill.
8	12	4 6	24	2 6	3	–	1-4	high	Flour mill.
8	8	3 6	20	2 2	1	–	1-4	high	Flour mill.
8	10	4 –	20	2 6	1	–	1-4	high	Mill saw.
8	8	3 –	21	2 6	1	–	3-16	high	Mill.
8	8	3 –	20	3 –	1	–	1-4	high	Mill.
8	10	3 6	20	3 –	2	–	1-4	high	Saw mill.

R 8—Continued.

Date when made.	Diameter of the cylinder.	Length of stroke of the cylinder.	Length of the boilers.	Diameter of the boilers.	Number of boilers.	Number of flues in each boiler.	Thickness of iron used in making the boilers.	High or low pressure.	For what purpose
	ft.	ft. in.	ft.	ft. in.			in.		
1838	10	3 10	22	2 2	2	–	1-4	high	Saw mill.
1838	9	3 –	18	2 2	2	–	1-4	high	Mill to grind.
1838	8	3 9	19	3 –	2	–	1-4	high	Saw mill.
1838	6	2 6	20	2 –	1	–	1-4	high	Saw mill.

The foregoing list is as correct as the nature of the case will admit; the r gines being 244, which were manufactured in the city.

There have been manufactured 8 engines in Jefferson mill, which is in the vici ville, the particular dimensions of which I have not been able to get in time.

There have been 47 manufactured in New Albany, which is also in the vicinity which I have not been able to get the particular dimensions of. The whole would

The men employed in manufacturing the above engines are as follows: Prentis Beatty & Curry, J. Waller, Glover & McDoyle, L. Sheve & Co., J. Horning, R ler, Cox & Bradford, Snitz & Day, John Rose.

J. WATER, *Lou*

R 9.

PORT OF SAINT LOUI

November 2

SIR: Enclosed I have the honor to forward a statement of al now in use at this port.

There are no locomotives in use in Illinois or Missouri.

It is not in my power to obtain more information in relation engines, in the two States, than was communicated in my qu turns at the end of last quarter. Not a single person to whom I my application in the two States has, as yet, seconded my eff sponded to my advertisements in the papers.

There are, no doubt, more engines in use in the two States stated in my report; but I do not think any accidents have c any of them.

With great respect, your obedient servant,

N. RANNE

Surve

Hon. LEVI WOODBURY.

Return respecting steam-engines used in steamboats in the district of Cincinnati, (Ohio;) prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth.	Depth.	Where built	When built.	By whom built.	Names of owners.	Names of captains.	Names of engineers.	Power, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
							Year									
Wyoming	Maysville	–	–	–	–	Augusta	1832	–	J. Dobbins	J. Dobbins.	–	32	High	Wilder, Lyon, & Co.	1832	6 y'rs.
New Emigrant	Kenawha	96 00	–	–	–	Cincinnati	1832	–	J. Miller	–	–	28	High	Wilder, Lyon, & Co.	1832	6 y'rs.
Fairy Queen	Charleston	60 29	–	–	–	Brush creek	1832	–	– – –	–	–	18	High	Wilder, Lyon, & Co.	1832	6 y'rs.
Dolphin	Cincinnati	50 00	–	–	–	Cincinnati	1832	–	P. James	–	Davis	32	High	Wilder, Lyon, & Co.	1832	2 y'rs.
Ben. Franklin	–	130 00	–	–	–	Cincinnati	1832	Leatherbury.	– – –	J. James	–	72	High	Harkness and Co.	1832	6 y'rs.
Splendid	–	354 66	–	–	–	Cincinnati	1832	–	Lawrence & Co.	–	–	120	High	Harkness and Co.	1832	6 y'rs.
Friendship	–	120 00	–	–	–	Cincinnati	1833	–	– – –	–	–	50	High	Goodloe and Co.	1833	5 y'rs.
Leonidas	Cincinnati	–	–	–	–	Cincinnati	1833	–	– – –	–	C. Church	30	High	Wilder, Lyon, & Co.	1833	2 y'rs.
Argo	Cincinnati	85 00	–	–	–	Jeffersonville	1833	–	– – –	–	–	36	High	Harkness and Co.	1833	5 y'rs.
Gladiator	Cincinnati	99 00	–	–	–	Cincinnati	1834	–	– –	–	–	54	High	Harkness and Co.	1834	4 y'rs.
Princeton	–	125 05	–	–	–	Rockville	1834	–	McClure & Co.	–	–	48	High	Harkness and Co.	1834	4 y'rs.
Paul Jones	–	170 00	–	–	–	–	1834	–	Eckert & Brodwell	–	–	65	High	Goodloe and Co.	1834	4 y'rs.
Cuba	Cincinnati	84 00	–	–	–	Cincinnati	1834	–	H. Freeland	H. Freeland.	J. Miller	22	High	Wilder, Lyon, & Co.	1834	4 y'rs.
Wave*	Kenawha	80 00	–	–	–	Cincinnati	1835	–	J. Rogers	Wheat'n	–	20	High	Wilder, Lyon, & Co.	1835	2 y'rs.
Ferry-boat	Cincinnati	60 00	–	–	–	Cincinnati	1835	–	– – –	–	–	25	High	J. W. Bakewell	1835	3 y'rs.
New York	–	185 00	–	–	–	–	1835	–	S. Starley & Co.	–	–	80	High	Goodloe and Co.	1835	3 y'rs.
N. America	–	400 00	–	–	–	–	1835	–	J. M. Rowan & Co.	–	–	210	High	Goodloe and Co.	1835	3 y'rs.
Swiss Boy	–	150 00	–	–	–	–	1835	–	– – –	–	–	55	High	Goodloe and Co.	1835	3 y'rs.
Adriatic	Cincinnati	282 00	–	–	–	Cincinnati	1835	–	Samuel Perry	–	–	130	High	Harkness and Co.	1835	3 y'rs.

* Burnt.

S 1—Continued.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth.	Depth.	Where built.	When built.	By whom built.	Names of owners.	Names of captains.	Names of engineers.	Power in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
Columbus	Cincinnati	340 00	–	–	–	Portsmouth	1835	–	H. A. Jones	–	–	180	High	Harkness and Co.	1835	3 y'rs.
General Pike	Cincinnati	151 00	–	–	–	Cincinnati	1835	–	Strader & Co.	–	–	72	High	Harkness and Co.	1835	3 y'rs.
Patrick Henry	Cincinnati	115 00	–	–	–	Cincinnati	1835	–	S. G. Shropshire & Co.	–	–	50	High	Harkness and Co.	1835	3 y'rs.
Swiftsure	Cincinnati	95 00	–	–	–	Cincinnati	1835	–	Kraft, Moreland, & Co.	–	–	50	High	Harkness and Co.	1835	3 y'rs.
Ben. Franklin	Cincinnati	194 45	–	–	–	Cincinnati	1836	–	J. B. Summon	–	–	140	High	Harkness and Co.	1836	2 y'rs.
Embassador	Cincinnati	440 00	–	–	–	Cincinnati	1836	–	J. J. James	–	–	210	High	Harkness and Co.	1836	2 y'rs.
Echo	Cincinnati	158 00	–	–	–	Salisbury	1836	–	W. McClure & Co.	–	–	75	High	Harkness and Co.	1836	2 y'rs.
Independence	Cincinnati	275 63	–	–	–	Cincinnati	–	–	H. A. Wheeler	–	–	210	High	Harkness and Co.	1836	2 y'rs.
Lexington	Cincinnati	230 64	–	–	–	Cincinnati	1836	–	Wm. Alter & Co.	–	–	90	High	Harkness and Co.	1836	2 y'rs.
Mediator	Cincinnati	225 00	–	–	–	Cincinnati	1836	–	P. Rogers & Co.	–	–	108	High	Harkness and Co.	1836	2 y'rs.
Post Boy	Cincinnati	150 00	–	–	–	Cincinnati	1836	–	Strader & Co.	–	–	72	High	Harkness and Co.	1836	2 y'rs.
Commerce	Cincinnati	165 00	–	–	–	–	1836	–	J. Strader	Key	–	54	High	Wilder, Lyon, & Co.	1836	2 y'rs.
Clyde	–	190 00	–	–	–	–	1836	–	Brodwell & Co.	Evans	–	45	High	Wilder, Lyon, & Co.	1836	2 y'rs.
Tuckahoe	Kenawha	–	–	–	–	Cincinnati	1836	–	H. Freeland	H. Freeland.	Shall	24	High	Wilder, Lyon, & Co.	1836	2 y'rs.
Crockett	Kenawha	–	–	–	–	Cincinnati	1836	–	Donelly	Donelly	–	30	High	Wilder, Lyon, & Co.	1836	2 y'rs.
Atalanta	–	200 00	–	–	–	–	1836	–	Samuel Stirley	–	–	90	High	Goodloe and Co.	1836	2 y'rs.
Arkansas*	–	186 00	–	–	–	–	1836	–	- - -	–	–	70	High	Goodloe and Co.	1836	2 y'rs.
Motto	–	100 00	–	–	–	–	1836	–	- - -	–	–	40	High	Goodloe and Co.	1836	2 y'rs.
Commodore	–	204 00	–	–	–	–	1837	–	J. Rogers	–	–	110	High	Goodloe and Co.	1837	1 y'r.
Little Rock	–	156 63	–	–	–	–	1837	–	J. Strader & Co.	–	–	60	High	Goodloe and Co.	1837	1 y'r.
Tarquin	–	168 00	–	–	–	–	–	–	J. Adams & Co.	–	–	80	High	Harkness and Co.	1837	1 y'r.
Athenian	–	140 00	–	–	–	Paducah	1838	–	Farrar	Farrar	–	50	High	J. W. Bakewell	1838	½ y'r.
Casket	–	90 39	–	–	–	Ripley	1836	–	John Moore	–	–	40	High	Goodloe and Co.	1836	2 y'rs.

* Sunk.

Swan*	-	-	112	55	-	-	-	-	-	-	-	-	-	-	-	45	High				2 y'rs.
Sunflower	-	-	70	85	-	-	-	Cincinnati	-	1836	-	-	-	-	-	30	High	Hanks and Niles	-	1836	2 y'rs.
Lady Scott	-	-	58	92	-	-	-	Maysville	-	1836	-	Wood & Ross	-	-	-	20	High	Old engine	-	1836	2 y'rs.
Saline	-	-	75	00	-	-	-	Kenawha, Va.	-	-	-	McFarlane & Co.	-	-	-	30	High	Old engine	-	1836	2 y'rs.
Triumph	-	-	68	20	-	-	-	Cincinnati	-	1837	-	Yeatman, Wilson, & Co.	-	-	-	25	High	Yeatman, Wilson, and Co.		1837	1 y'r.
Victor	-	-	90	00	-	-	-	Cincinnati	-	1837	-	J. Rogers & Co.	-	-	-	50	High	Wilder, Lyon, & Co.		1837	1 y'r.
Winchester	-	-	190	00	-	-	-	Cincinnati	-	1837	-	J. Scott & Co.	-	-	-	65	High	Thomas and Co.	-	1837	1 y'r.
Eagle	-	-	56	35	-	-	-	Green's mill	-	1837	-	-	-	-	-	20	High	Harkness and Co.	-	1837	1 y'r.
Indian	-	-	73	40	-	-	-	Cincinnati	-	1837	-	J. McClure & Co.	-	-	-	30	High	J. W. Bakewell	-	1837	1 y'r.
Monarch	-	-	317	70	-	-	-	Cincinnati	-	1837	-	S. W. Fullerton	-	-	-	210	High	Harkness and Co.	-	1837	1 y'r.
Marmion	-	-	204	45	-	-	-	Cincinnati	-	1837	-	J. Starley & Co.	-	-	-	105	High	Wilder, Lyon, & Co.		1837	1 y'r.
North Star	-	-	157	45	-	-	-	Cincinnati	-	1837	-	W. H. Latham	-	-	-	50	High	Wilder, Lyon, & Co.		1837	1 y'r.
Ozark	-	-	130	25	-	-	-	Cincinnati	-	1837	-	Robert Hozey	-	-	-	45	High	Old engine	-	1837	1 y'r.
Renown	-	-	163	00	-	-	-	Rising Sun	-	1837	-	Bride & Blackman	-	-	-	60	High	Yeatman, Wilson, and Co.		1837	1 y'r.
Bridgewater	-	-	160	00	-	-	-	Stout's landing		1837	-	William Wright	-	-	-	60	High	Tucker and Co.	-	1837	1 y'r.
Troubadour	-	-	113	47	-	-	-	Cincinnati	-	1837	-	J. Starley & Co.	-	-	-	40	High	-	-	1837	1 y'r.
Tide	-	-	99	45	-	-	-	Kenawha	-	1837	-	J. Scott & Co.	-	-	-	40	High	-	-	1837	1 y'r.
Alleghany†	-	-	37	19	-	-	-	-	-	-	-	-	-	-	-	20	High				
Clinton‡	-	-	102	00	-	-	-	-	-	-	-	-	-	-	-	40	High				
Citizen†	-	-	97	25	-	-	-	-	-	-	-	-	-	-	-	35	High				
Companion‡	-	-	89	45	-	-	-	-	-	-	-	-	-	-	-	35	High				
Conqueror*	-	-	336	80	-	-	-	-	-	-	-	-	-	-	-	110	High				
Envoy‡	-	-	91	81	-	-	-	-	-	-	-	-	-	-	-	50	High				
Exchange‡	-	-	67	81	-	-	-	-	-	-	-	-	-	-	-	30	High				
Gazelle‡	-	-	129	88	-	-	-	-	-	-	-	-	-	-	-	50	High				
JohnHancock‡	-	-	100	00	-	-	-	-	-	-	-	-	-	-	-	45	High				
Harrold*	-	-	99	60	-	-	-	-	-	-	-	-	-	-	-	40	High				
Logan‡	-	-	70	83	-	-	-	-	-	-	-	-	-	-	-	35	High				
L'dyFranklin‡	-	-	177	05	-	-	-	-	-	-	-	-	-	-	-	65	High				
Moselle§	-	-	199	45	-	-	-	-	-	-	-	-	-	-	-	75	High				
Superior†	-	-	201	00	-	-	-	-	-	-	-	-	-	-	-	90	High				
William Wirt‡	-	-	110	00	-	-	-	-	-	-	-	-	-	-	-	50	High				

* Burnt. † Broke up. ‡ Sunk. § Blown up.

n respecting steam-engines used in steamboats in the district of Sandusky, Ohio; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or command'rs.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine constructed.
			feet.	feet.	feet.										
Sandusky	Lake Erie.	377 00	148	26½	10 1-16	Sandusky	Nov. 1834	F. Church	Sandusky Co.	O. Simons	Whitman	180	Low	J. P. Allaire	1833
Columbus		391 00	121	28 1-16	11 7-16	Huron	Sept. 1835	S. P. Gould	A. Walker & al.	A. Walker	C. Munson	150	high	Warden and Bennett.	Sept. 1835
Cincinnati		116 00	88	20	7 2-16	Sandusky	Aug. 1836	D. Dibble	O. Mallory	John Young	H. Cond	80	"	Hathaway	" 1836
Commerce		78 69	74½	17 6-16	6 9-16	Do	May 1837	Do	W. Townsend and al.	N.P.Havens	J. Chapman	50	"	Pratt	1832

Return of steam-engines used on railroads in the district of Sandusky, Ohio; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Mad River & Lake Erie.	Sandusky	82½	High	1837	Roger Ketcham and Grosvenor, Paterson, N. J.	4 mos.	Weight, including tender, twelve tons—exclusive, nine tons. Boiler capable of carrying 125 pounds steam per square inch. Velocity 50 miles per hour with steam 75 pounds per inch.

Return of all the steam-engines in use in the district of Sandusky, Ohio, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Sandusky city	Sandusky foundry	Jacob A. Barker	10	Foundry	High	1834	Clark and Huston	Ever since.
Portage plaster bed	Portage mill	W. Townsend & Co.	18	Grinding plaster	"	1835	Do	Do.
Port Clinton	Port Clinton steam-mill	E. D. A. Aines	15	Grinding flour	"	1834	Thomas Reilly	18 m'ths.
Sandusky city	Marble mill	Jacob A. Barker	40	Do	"	1835	Clark and Huston	12 "

Return respecting steam-engines used in steamboats in the district of Sandusky, Ohio; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or command'rs.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom constructed.	When engine constructed.
			feet.	feet.	feet.										
Sandusky	Lake Erie.	377 00	148	26½	10 1-16	Sandusky	Nov. 1834	F. Church	Sandusky Co.	O. Simons	Whitman	180	Low	J. P. Allaire	1833
Columbus		391 00	121	28 1-16	11 7-16	Huron	Sept. 1835	S. P. Gould	A. Walker & al.	A. Walker	C. Munson	150	high	Warden and Bennett.	Sept. 1835
Cincinnati		116 00	88	20	7 2-16	Sandusky	Aug. 1836	D. Dibble	O. Mallory	John Young	H. Cond	80	"	Hathaway	" 1836
Commerce		78 69	74½	17 6-16	6 9-16	Do	May 1837	Do	W. Townsend and al.	N.P.Havens	J. Chapman	50	"	Pratt	1832

Return of steam-engines used on railroads in the district of Sandusky, Ohio; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Mad River & Lake Erie.	Sandusky	82½	High	1837	Roger Ketcham and Grosvenor, Paterson, N. J.	4 mos.	Weight, including tender, twelve tons—exclusive, nine tons. Boiler capable of carrying 125 pounds steam per square inch. Velocity 50 miles per hour with steam 75 pounds per inch.

Return of all the steam-engines in use in the district of Sandusky, Ohio, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Sandusky city - -	Sandusky foundry -	Jacob A. Barker -	10	Foundry - -	High	1834	Clark and Huston -	Ever since.
Portage plaster bed -	Portage mill -	W. Townsend & Co.	18	Grinding plaster -	"	1835	Do -	Do.
Port Clinton - -	Port Clinton steam-mill	E. D. A. Aines -	15	Grinding flour -	"	1834	Thomas Reilly -	18 m'ths.
Sandusky city - -	Marble mill - -	Jacob A. Barker -	40	Do - -	"	1835	Clark and Huston -	1½ "

Return respecting all the steam-engines in use in the district of Cuyahoga, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose engine used.	High or low pres.	When engine constructed.	By whom constructed.	How long in use.
Cleveland, Ohio	Fulton iron-works	P. B. Andrews	8	Manufac. steam-engines	High	1833	P. B. Andrews, Cleveland	5 years.*
Do	Cleveland foundry	S. Hathaway	6	Do	High	1832	Do	6 years.†
Do	Steam-mill	John M. Sterling	15	Sawing and grinding	High	1832	Do	6 years.*
Do	Soda works	Dr. Lymah	3	Making soda-water	High	1838	Do	4 months‡
Ohio city	Cuyahoga st. furnace	Cuyahoga steam f. co.	12	Making steam-engines	High	1836	Do	2 years.*
Twinburg	Steam-mill	—— Butler	20	Sawing	High	1835	Do	3 years.*
Rockport	Do	L. Case	20	Do	High	1835	Do	3 years.*
Sullivan	Do	Porter & Palmley	25	Sawing and grinding	High	1834	Do	4 years.*
Litchfield	Do	D. Hinman	20	Do	High	1835	Do	3 years.*
Medina	Do	—— Blanack	20	Sawing and carding wool	High	1836	Do	2 years.*
Brunswick	Do	—— Squires	20	Sawing	High	1834	Do	4 years.*
Do	Do	—— Riethe	40	Sawing and carding wool	High	1836	C. A. Monson	2 years.*
Oberlin	Do	Oberlin institute	30	Sawing and grinding	High	1833	P. B. Andrews	5 years.*
Do	Manual-labor shop	Do	5	Propelling machinery	High	1838	Do	1 week.*
Mount Eaton	Steam-mill	Col. Youdy	30	Flouring, &c.	High	1834	Do	4 years.*
Dover	Furnace	Cuyhoga steam f. co.	12	Propel'g bellows and mach'y	High	1837	Cuyahoga st. furnace co.	1 year.*
Parma	Steam-mill	—— Taggart	12	Sawing	High	1835	P. B. Andrews	3 years.*
Brooklyn	Tannery	—— Storer	8	Propel'g mach'y and pump'g	High	1838	Do	1 week.*

* In fine working order. † Discontinued till spring. ‡ Discontinued till summer.

Custom-house, *District of Cuyahoga, Cleveland, (Ohio,) October 1, 1838.*

SAMUEL STARKWEATHER, *Collector.*

S 5.

CUSTOM-HOUSE,
Cleveland, (Ohio,) October 1, 1838

SIR: I herewith enclose to you statements relative to steamboats, called for by your circular of the 12th of July ultimo.

No accidents to steamboats have occurred in this district. The steamboat Washington, belonging to this district, was burnt in the district of Buffalo, in the month of July last; and as the accident occurred in that district, an account of the same, by the terms of your circular, will be given in the returns of the collector of that district. That accident was the greatest that ever happened to steamboats since the commencement of steam navigation upon the lakes. The steamboat Washington was of 400 tons burden, built at Ashtabula in this district, with a high-pressure engine (manufactured in Pittsburg) of 160-horse power; and when on her second trip from Detroit to Buffalo, while passing down lake Erie, 5 or 6 miles from shore, and within 20 miles of Buffalo, (going at her usual speed,) the boat took fire and burnt, with great rapidity, to the water's edge. Of more than 100 passengers on board, over 50 men, women, and children, were destroyed. The accident occurred about midnight, and was caused by the most gross and criminal carelessness of those who had charge of the boat. The fire broke out under the hearths of the furnaces, which, with the boilers, were placed on the bottom of the boat; and by the omission to cause water to be conducted under the hearths, or ash-pans, the bottom of the boat took fire, and rapidly consumed the whole.

I do not feel myself competent, at this time, to make any suggestions as to the rules which would be useful for the regulations of boats with their crews. The law of July last, for the better security of passengers on board of vessels propelled in whole or in part by steam, is now in force, and it is to be hoped that its operation will effect the ends desired.

I have the honor to be, with great respect, your obedient servant,

SAMUEL STARKWEATHER,
Collector of customs.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Cuyahoga; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons & 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.
			ft. in.	ft. in.	ft. in.				
United States -	Lakes Erie, Michigan, & Huron.	366 80	140 0	28 4	10 0	Huron, Ohio	1834	F. Church -	N. M. Standart, David Griffith, Pease & Co.
Cleveland -	Do. -	579 68	180 0	28 11	11 8	Huron -	1837	Do. -	David Griffith, Beebe, Allen, & Co.
Constitution -	Do. -	443 52	140 9	28 1	11 10	Conneaut -	1837	G. W. Jones -	Gillman Appleby, M. Kingman, & Co.
Bunker-hill -	Do. -	457 29	154 4	28 4	11 6	Black river -	1837	F. N. Jones -	Richard Winslow, J. W. Allen, & Co.
Lexington -	Do. -	363 53	152 0	22 6	11 1	Black river -	1838	Do. -	F. N. Jones, Meeker, Gates, & Co.
Rochester -	Do. -	472 41	158 5	27 6	11 6	Richmond -	1838	Jas. Rockwood	J. M. Goodman, A. W. Walworth, T. P. Handy & Co.
James Madison -	Do. -	630 53	178 0	30 9	12 3	Erie, Pa. -	1837	John Richards -	George Williams & Charles M. Reed.
North America -	Do. -	361 45	147 8	26 0	10 0	Conneaut -	1834	Augustus Jones	Conneaut Association, incorporated.
Fairport -	Do. -	259 00	135 9	22 4	9 0	Fairport -	1838	A. B. Herick -	Alvah Cable, James Blair, & Robt. Harper.

Name of boat.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
United States	John Shook	A. Cluff	160	High	Warden & Benney, Pittsburg, Pa.	1834	5 years, including 1838.
Cleveland	A. E. Hart	Walter Cramron	225	Low	W. Kendide, West Point	1837	1 year.
Constitution	Gilman Appleby	Elias Daley	184	High	Harkness, Voorhies, & Co., Cincin'a	1837	1 year.
Bunker-hill	D. P. Nickerson	J. L. Cook, 1st, D. A. Warren, 2d.	190	High	Warden & Benney, Pittsburg	1837	From April, 1837, until September, 1838.
Lexington	F. N. Jones	Adams	80	High	T. More, Detroit, Michigan	1834	4 years.
Rochester	Kimball Esterbrooks	E. Rogers	190	High	S. Hathaway, Cleveland, Ohio	1838	4 months.
James Madison	J. M. Fodyer	John Miles	160	High	Erie, Pennsylvania	1837	1 year and 4 months.
North America	E. L. Edwards	N. Norton & M. H. Collins	160	High	Benney & Warden, Pittsburg	1834	4 years.
Fairport	James Blair	W. S. Hill	80	High	S. Hathaway, Cleveland	1838	5 weeks.

CUSTOM-HOUSE,
District of Cuyahoga, (Ohio,) Cleveland, October 1, 1838.

SAMUEL STARKWEATHER,
Collector of customs.

S 7.

COLLECTOR'S OFFICE, MAUMEE CITY,
District of Miami, Ohio, October, 1838.

SIR: In compliance with your circular of the 12th July last, I herewith transmit returns respecting *steam-engines* in *steamboats*, on *railroads*, and in *mills*, within this district.

These returns would have been made with more promptness, but were delayed in consequence of the severe sickness of *myself*, *assistant*, and *six others* in my family, together with the difficulty in ascertaining the facts in relation to the calls of the circular.

There has no accident occurred within this district, to steam-engines, that has come within my knowledge.

I would respectfully suggest the expediency of the act of 7th July last being so altered and amended as to require *masters* of steamboats and *engineers* to furnish certificates of their being competent to discharge their respective duties, and men of moral and temperate habits. This, in my opinion, will be highly necessary for the safety of steamboats, and the security of the lives of passengers. The old saying is, "birds of a feather flock together." As the master is, so will, probably, be the men.

I have the honor to be, very respectfully, your obedient servant,

CHAS. C. P. HUNT, *Collector.*

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Return respecting steam-engines used in steamboats in the district of Miami, Ohio; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern, in feet & in.	Breadth at the broadest part, in feet & in.	Depth from spar-deck to keel, in feet & in.	Where built.	When built.	By whom built.	Name of owners.	Names of masters or command'rs.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
																Yrs.
Oliver Newberry	Plying between Maumee city and Buffalo.	170 12	120 8	19 9	7 8	Mt. Clemens	1833	Church	Detroit & St. Clair Steamboat Comp'y.	A. Reed -	Boat is not running at present.	60	High	Moore & Co. Detroit.	1833	5
Monroe -		341 27	144 7	26 0	9 8	Monroe, Mich.	1834	Unknown	R. A. Forsyth & others.	S. F. Atwood.	A. Harris -	130	High	Do.	1834	4
Oliver H. Perry		352 25	146 2	26 4	9 5	Perrysburg, O.	1834	A. Jones	Perrysburg S. B. Comp'y.	David Wilkison.	A. Johnson	160	High	P. B. Andrews & Co.	1835	3
Anthony Wayne		390 46	156 6	–	25 9	Do.	1837	S. Hubble	Miami S. B. Company.	Amos Pratt	W. Watkins	120	High	Hathaway & Co.	1836	2
Chesapeake -		412 49	172 0	24 6	10 2	Maumee city	1838	A. Jones	Jesse Smith & others.	D. Howe -	C. Radcliff	120	Low	St. Mary's f'dry, Montreal.	*	†
Wabash -	From this to Detroit.	83 23	100 0	14 0	6 2	Perrysburg, O.	1838	S. Hubble	Wm. Earle & others.	C. K. Keiler	F. Pike -	65	High	Wilkison & Son.	1836	2
David Crockett -	On river	18 30	67 0	15 0	2 0	Brunersburg, Ohio.	1836	L. Birdsal	J. E. Hunt -	None. Not running.	None -	20	High	Davis & Co.	1835	3

* Uncertain. † Uncertain.

S 8—Continued.

***Return of steam-engines** used on railroads in the district of Miami, Ohio; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.*

Name of railroad.	Name of locomotive.	Power of engine.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Erie and Kalamazoo -	Toledo and Adrian -	15 horse, or 7 tons	High	1837	M. W. Baldwin, Philada.	1 year.	

Return of all the steam-engines in use in the district of Miami, Ohio, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When engine constructed.	By whom constructed.	How long in use.	Remarks.
[illegible]	[illegible]	[illegible]	27	Saw mill -	High	1836	C. Davis, Detroit, Mich. -	Yrs. 2	

MICHIGAN.

T 1.

COLLECTOR'S OFFICE,
Detroit, November 9, 1838.

n pursuance of your instructions, the following suggestions are
lly made to the Department, as material for legislative enact-
lative to the security of lives and property risked in steam-vessels.
re received from the most experienced engineers and manufac-
steam-engines in this State.

ı each steam-vessel there should be a competent engineer, who
ıve *absolute* control of the engine, and whose duty it should be
he master in every thing else pertaining to the management of

'ery engineer should be examined as to his capacity, by some
:ed person, and should receive a certificate of his ability before
)wed to act. This duty might be performed by the "inspector
ı and machinery" attached to each district.

ıe manufacturers of boilers should be required to heat every sheet
efore the possibility of danger to any life, so that the defective
ıy be detected.

ow-pressure boilers should be braced every ten inches.

here should not be more than two high-pressure boilers connected,
se; for, should a greater number be connected, there would be
ger when a boat "lists," as it is called. The master, having full
'er the engineer, frequently compels him to hold on steam, while
ne time *he is increasing his fires*, lying still or at a "list" at the
n consequence of which the flues on the upper side become red
, when the boat returns to its proper position, or "even keel,"
· acting on the hot iron frequently causes explosion, although the
ay be in good order.

the honor to be, sir, very respectfully, your obedient servant,
JOHN McDOWELL,
Collector of the customs.

ıEVI WOODBURY,
Secretary of the Treasury.

T 2.

Return respecting steam-engines used in steamboats in the district of Michigan; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Name of master or commander.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.
			ft. in.	ft. in.	ft. in.										
Governor Marcy.	Betw. Detroit and Saginaw city, Michigan.	161 80	125 0	18 6	7 3	Black Rock, N. Y.	1833	Carrick & Biddle, of Buffalo, N. Y.	J. M. Mead and A. S. Kellogg, of Detroit; Moses Baker, W. Williams, M. Case & Son, O. H. Dibble, H. Treat, and Roswell Carter, all of Buffalo, N. Y.	G. R. McKenzie.	D. Watours.	35	Low	J. Langdon, of Troy, N. Y.	1826*a*
Star -	Unfinished.	128 62	108 0	18 0	7 0	Belvidere, Mich.	1837	B. Goodsell, of Detroit.	J. M. Mead, J. L. Conger, E. Morse, A. Hartshorn, A. S. Porter, and Cullen Brown, all of Detroit.	Thos. H. Peck.	Not running.	45	High	Thomas G. Moores, of Detroit.	1837*b*
Owashenonk.	Betw. G. rapids & Gr'd Haven, Mi.	45 50	101 4	14 1	2 10	G. Haven, Mich.	1838	–	R. Stuart, of Detroit; R. Robinson, L. A. White, D. Carver, and W. M. Ferry, of Grand Haven, Michigan.	Thos. W. White.					
R. Island	Betw. Detroit and Clevel'd, Ohio.	164 37	111 6	17 6	8 10	Portl'd, Ohio.	1836	G. R. McKenzie, of Detroit, M.	J. Smith, of Newark, O.; S. L. Petric, of Cleveland, Ohio; S. L. Gelston, of Buffalo, N. Y.; R. & L. Noyes, and O. & M. Tomlinson, both of Albany, N. Y., and W. Barnard, of N. Y., as trustees of the Western Transportation Company; and L. Godard, of Detroit, and [illegible]	H. Joy -	J. Moores	60	High	J Gibson, of BlackRock, N. Y., in - Repaired, & new boilers put in by J. Newman &	1832*c*

	chigan.																
Champl'n	Betw. Detroit and Buffalo, N. Y.	125	90	119	6	22	6	9	0	Detroit	1837	Originally a British bottom. The name of the first builder not known. She was rebuilt at Detroit by M. Gooding.	Julius Eldred, Lewis Godard, Milton Moon, and John Drew, of Detroit.	Luther B. Parker.	J. Sharpe	60	Low	The engine is of British manufac're; name of maker cannot be ascert'd.	sup'd in 1816*e*
Macomb	Detroit & Port Huron, Michigan.	101	73	91	6	17	6	6	9	Mount Clemens, M.	1837	W. Dixon, of Mount Clemens.	C. Clemens, James C. Allen, R. O. Cooley, Beers & Snooks, George Kellogg & W. Roy, of Mt. Clemens; and E. Morse & Co., Benj. Woodsworth, and Orus Fields, of Detroit.	H. Robinson.	S. Bacon	45	High	Thomas G. Moores, of Detroit.	1837*f*
Erie	Betw. Detroit and Monroe, Mich'n.	149	00	120	6	18	0	7	2	Detroit	1836	F. Church, of Huron, Ohio.	Pease, Chester, & Co., Poupard & Petty, A. Edwards, Chapin & Owen, James Scott, J. L. Whiting, Edward Bancroft, Griffith, Pease, & Co., P. & J. J. Godfroy, A. & R. Hart, Thomas B. Clarke, Geo. B. Martin, A. T. McReynolds, C. M. Giddings, E. F. Starling, T. O. Hill, John Truax, P. J. Desnoyers, Enoch Jones, Benj. Le Breton, R. Brown, jr., B. Campan, B. G. Barker, Davis, Brodhead, & Co., S. P. Fletcher, E. Brooks, J. Beaubien, C. Sterling & Co., D. Lusk, S. Ward, J. Biddle,	Arth. Edwards.	H'y Gaylord.	55	Low	Novelty Works, N. Y.	1836*g*

a In use five years. *b* Not running. *c* In use five months; since repaired. *d* In use six weeks; was rebuilt. *e* Four months since the boat *f* In use twelve months. *g* In use two years.

T 4—Continued.

Name of place where located.	Name of mill or manufactory.	Names of owners.	For what purpose used.	High or low pressure.	By whom constructed.	When constructed.	How long in use.	Power of engine, in horses.
Hamtramck, Wayne co.	Tannery - -	Farnsworth & Ludden, Detroit.	Tanning hides	High	P. B. Andrews, Cleveland, O. -	1835	3 years -	6
Detroit, Wayne co. -	Sash factory - -	J. Rice & Co., Detroit	Making window sashes.	High	Thomas G. Moores, Detroit -	1834	4 -	8
Monroe, Monroe co. -	Monroe iron foundry -	Smith & Lewis, Monroe.	Making mach'ry, &c.	High	Detroit iron company - -	1837	1 -	14
Wall Lake, Oakland co.	Wall Lake steam mill -	—— Buel, Wall Lake, Oakland county.	Sawing timber	High	Charles Davis, Detroit - -	1836	2 -	12
Lyon, Oakland county -	Oakland county mill -	Messrs. Thompson & Lyon.	Do -	High	Charles Davis, Detroit - -	1836	2 -	12
Monroe, Monroe, co. -	- - - -	State of Michigan -	Dredging ship canal.	High	Charles Davis, Detroit - -	1837	1 -	25

NOTE.—There are four new mills building at or near the mouth of Grand river, Ottowa county, and one at the mouth of the Kalamazoo river. The engines are being constructed by the Detroit Iron Co. Names of owners unknown.

DETROIT, *(Michigan,) November* 9, 1838.

JOHN McDOWELL,
Collector of the customs for District of Detroit.

Return of steam-engines used on railroads in the district of Michigan; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	Name of locomotive.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Central Railroad of the State of Michigan	Ironsides	30	High	1836	—— Dunham, of New York city	Six months.
	Detroit	30	High	1837	M. W. Baldwin, of Philadelphia	Ten months.
	Michigan	30	High	1837	Do do	Nine months.
	Pittsburg	30	High	1837	McClung, Wade, & Co., Pittsburg	Three months.
Erie and Kalamazoo Railroad	Adrian	32	High	1837	M. W. Baldwin, Philadelphia	Fourteen months.*
	Toledo	32	High	1837	Do do	Eleven months.*

REMARKS.—It is impossible to get exactly the horse-power of a locomotive, as no number of horses can travel thirty miles per hour, and it is necessary to calculate the speed as well as the weight transported.

* These two engines have not been in constant use, as it is the practice on this road to run them alternately, in order that one should be at all times in good order.

T 8.

Return respecting steam-engines used in steamboats in the district of Michilimackinac; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part, in feet and inches.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			feet.		*ft.*										A.D.	
Pennsylvania.	Buffalo, Green Bay, & Chicago.	395 38	150	25 4	11	Erie, Pa.	1832	J. Richards.	William H. Bruce, Step'n A. Baldwin, John G. Ransom.	Lester H. Colton.	Wm. Burnett & Jacob Wolf.	180	High	Warden & Benny, Pittsburg, Pa.	1837	1 year.

COLLECTOR'S OFFICE, *Michilimackinac, September* 8, 1838.

ABRAHAM WENDELL, *Collector.*

Return of all the steam-engines in use in the district of Michilimackinac, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.
Town of Two Rivers, Wisconsin Territory.	Twin-river steam-mill	John Law and Robert M. Eberts.	30	Saw-mill	High	July, 1837	Stephen Whitaker, Cleveland, O.	Since April 2, 1838.

REMARKS.

The above described is a horizontal, high-pressure steam-engine, with one ten-inch cylinder of four-feet stroke, with shaft fly-wheel; with three boilers, twenty-four feet long and twenty-three inches in diameter; together with a governor. The whole of said engine and boilers are made of the best materials. The engine performs thirty-five revolutions per minute, and propels three saws on the most approved plan, together with other machinery.

COLLECTOR'S OFFICE, *Michilimackinac, October* 29, 1838.

ABRAHAM WENDELL, *Collector.*

DISTRICT OF COLUMBIA.

U 1.

NAVY DEPARTMENT,
November 15, 1838.

SIR: Your communications of the 29th and 30th ultimo, requesting information relative to steam-engines under the control of this Department, used for naval purposes, were referred to the Board of Navy Commissioners to collect and furnish the required information.

The enclosed copy of a letter from the Commissioners, with the accompanying documents, is submitted in answer to the reference.

I am, sir, very respectfully, &c.

J. K. PAULDING.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

U 2.

NAVY COMMISSIONERS' OFFICE,
November 13, 1838.

SIR: To enable the Board to comply with your instructions of the 31st ultimo, they addressed letters to the commandants of the navy yards where steam-engines have been used, or where there were steam-vessels in service. They have now the honor to enclose copies of their respective answers, which furnish all the information in possession of the Board, with the exception of the single fact, that the former steam-frigate Fulton was destroyed by the accidental explosion of her magazine, and not by her boilers, which had not been on board for many years.

The letters of the Secretary of the Treasury are herewith returned.

I have the honor to be, with great respect, sir, your obedient servant,

C. MORRIS.

Hon. JAS. K. PAULDING,
Secretary of the Navy.

U 3.

NAVY DEPARTMENT,
November 19, 1838.

SIR: Your communication of the 16th instant, requesting information relative to the first United States steamer Fulton, has been received.

In answer to your inquiries, I transmit a copy of a letter from the Board of Navy Commissioners, and the official report from the comm[illegible]

ant of the navy yard at New York, to this Department, relative to the explosion of the Fulton.

I request that the official report (being an original paper) may be returned to this Department as soon as practicable after having used it.

I am, sir, very respectfully, &c.

J. K. PAULDING.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

U 4.

NAVY COMMISSIONERS' OFFICE,
November 16, 1838.

SIR: In addition to the information given in our letter to you of the 13th instant, in relation to steam vessels and engines in use for the navy, the Board have the honor to state, that the *first* steam-frigate Fulton, of about twelve hundred tons burden, intended to carry an armament of 30 long thirty-two-pounders, was launched and put in operation in 1815. She was fitted with a low-pressure engine of, it is believed, 150-horse power, which gave her, in favorable circumstances, a velocity of from four to five knots per hour. She was moved by steam only a few times for trial, and was accidentally blown up in 1829. The engine was not on board of her, but was condemned as unfit for further use.

I have the honor to be, with great respect, sir, your most obedient servant,

I. CHAUNCEY.

Hon. J. K. PAULDING,
Secretary of the Navy.

U 5.

NAVY YARD, BOSTON, *November* 6, 1838.

SIR: In compliance with the request contained in the letter from the Board of the 1st instant, I herewith enclose an account of all the steam-engines in use at this yard at the present time, and of the steam-engine which was used in pumping while the dry dock was in course of building.

I have the honor to be, sir, very respectfully, your obedient servant,

JNO. DOWNES.

Com. ISAAC CHAUNCEY,
President Board of Navy Coms., Washington.

U 5—Continued.

An account of all the steam-engines in use at the Navy Yard, Boston.

Where situated.	For what purpose used.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Have any accidents occurred?	What were their causes?	What extent of calamity?
Navy Yard, Boston -	Pumping out excavation for dry dock.	15	High	May, 1828	E. A. Lester -	Four years and three months.	None -	None -	None.
Do - -	Pumping dry dock -	50	High	May, 1832	E. A. Lester -	Six years and three months.	None -	None -	None.
Do - -	Spinning and laying cordage.	15	High	Nov. 1837	T. Ashcroft -	One year -	Eng'r scald'd his face and leg.	Breaking of a cock.	Three weeks confinement.
Do - -	Spinning and laying cordage.	30	High	Nov. 1837	T. Ashcroft -	One year -	None -	None -	None.

REMARKS.—Three of the four boilers in use at the dry dock were built by E. A. Lester of ¼-inch iron, and delivered at the yard May, 1828. They were laid under cover till they were set, November, 1831; put in operation May, 1832; repaired March, 1838. The fourth boiler was built by L. Perkins, of ¼-inch iron. The iron proved to be bad, and the boiler was removed and replaced by a new one March, 1838.

JOHN DOWNES

U 6.

United States steam-frigate Fulton.

Two engines of 50-inch cylinders, 9-feet stroke; 250 horse-power, each at ordinary pressure.

Low-pressure or condensing engines.

Engines constructed in 1837, and in operation since December 1837 to the present time.

Manufactured by the West Point Foundry Association; built in New York navy yard, in 1837, by the Navy Department.

Charles W. Skinner, Esq., captain.

Charles H. Haswell, engineer.

Tonnage, 900 tons.

Length, from forward of stern to afterside of rail, 194 feet 8 inches.

Breadth of beam 35 feet, including planking.

Breadth, including wheel-houses, 61 feet 3 inches.

Depth, from spar-deck to keel, 22 feet and half an inch.

No accident ever occurred on board.

NOVEMBER 5, 1838.

U 7.

NAVY YARD, NEW YORK,

November 3, 1838.

GENTLEMEN: In reply to your inquiries of the 1st instant, I have to inform you that there is only one steam-engine at this yard in a condition for use, viz: the one belonging to the dredging-machine. This engine is high pressure, and works horizontally, and was constructed by the West Point Foundry Association in 1837; is about twenty-five-horse power; has not been in use except for trial.

The steam-engine was not on board the old Fulton when she blew up.

I have the honor to be, your obedient servant,

CH. G. RIDGELY.

To the COMMISSIONERS OF THE NAVY,

Washington.

U 8.

U. S. NAVY YARD, WASHINGTON,

November 3, 1838.

SIR: I have received your letter of the 1st instant, requesting certain information respecting the steam-engine now in use, and those formerly used at this yard; and proceed, as far as my knowledge and information extends, to make the following report:

The first steam-engine put into operation at this yard in 1810, was a low-pressure Bolton & Watt engine of the old construction, working steam

about three or four pounds pressure to the square inch. This engine was built by Smallman, of Philadelphia, and was kept constantly at work, without accident, until it was partially destroyed by the burning of the navy yard in the year 1814. Such parts of the engine as were not materially injured were collected, and the engine was rebuilt and put into successful operation by Mr. Samuel B. Ellis, former engineer of the yard, and continued in operation without any accident whatever until the year 1830, when, from the increase of machinery, her power (calculated for a 14-horse engine) was found inadequate to the performance of the work required, the engine was taken down, and a low-pressure one of more modern construction, of about 30-horse power, was substituted.

This engine was built by Mr. John Judge, former machinist of this yard, and worked steam of 15 pounds pressure. No accident of any kind occurred with this engine, but, from defective construction and disproportion of parts, it was found unable to perform the work expected. It was taken down and replaced by the engine now in use.

This is a high-pressure engine of 40-horse power, built by Rush & Muhlenburg, of Philadelphia, and was put into operation in October, 1834; it has been in operation ever since, without any accident occurring to stop it for a single day.

The engines referred to have all been used in propelling block machinery, saw-mills, tilt-hammers, turning lathes, &c.

Very respectfully, I am, sir, your obedient servant,

DANIEL T. PATTERSON,
Commandant.

Commodore I. CHAUNCEY,
President Board Navy Coms., Washington, D. C.

U 9.

UNITED STATES NAVY YARD,
Gosport, November 6, 1838.

SIR: In compliance with your order of the 3d instant, I submit the following statement relative to the steam-engines in this yard:

There are three engines now at work in the yard: the first in importance is that which is situated in the engine-house at the head of the dry dock, and is used for pumping the water from the dock while docking a ship, and also for keeping the dock free of water while the ship is being repaired. This engine was built by Lazel, Perkins, & Co., of East Bridgewater, Massachusetts. It is a high-pressure engine, of the power of 65 horses. It was first set in motion on the 28th of August, 1832; since which time it has been in almost daily use. No accident has ever occurred to this engine, with the exception of a crack in one of the joints of the steam-pipe, which was probably caused by some settlement in the brick-work; this, however, did not delay the working of the engine, as the leak was readily stopped. The boiler of this engine has become thin in places, but the *engine is* in excellent order.

The next engine is now employed in pumping the water from the dock, such as drains into the dock from the yard and from the

leaks in the dam. This engine was built by Mr. Charles Reeder, of Baltimore, and is also high pressure, and of the power of ten horses. The engine was first set in motion May 7, 1836; it was then used for pumping out a coffer-dam, made for the purpose of constructing a launching slip. Here it was in constant use for about six months; it was then taken down, and set up where it now stands, and was first set in motion in its present position March 2, 1837. The only accident which has occurred to this engine was the breaking of the lever and cock-shaft which works the force-pumps. This was caused by the water in the pipes and pumps being frozen. The engineer built a fire round the pumps, and supposed they were sufficiently warmed, but, upon starting the engine, there being still some ice beneath the plungers, the shaft and lever were broken. This, however, was a slight accident and was soon repaired. The engine is now in good order, and is a good engine.

The third engine is employed in pumping the water from a coffer-dam in the yard, built for the purpose of constructing a launching slip to ship-house A, and also for extending the quay walls. This engine was also built by Mr. Charles Reeder, of Baltimore, and is precisely like the last described, being of high pressure and of the power of ten horses. This engine was put in motion July 1, 1838. No accident has ever occurred to this engine. It is in good order, and is a good engine.

With great respect, your obedient servant,

WM. P. S. SANGER, *Engineer.*

Commodore L. WARRINGTON,
Commandant navy yard, Gosport, Virginia.

U 10.

WAR DEPARTMENT, *November* 15, 1838.

SIR: In reply to your letter of the 30th ultimo and its enclosures, calling for certain information respecting steam-engines and vessels in the employ of this Department, I transmit, herewith, reports and accompanying documents from the Chief Engineer, the Quartermaster General, and the Ordnance Office, which contain such as can readily be furnished at this time. Each of these offices has been required to take measures for obtaining, at as early a period as practicable, such further information as can be furnished by their agents. This will be laid before you as soon as received.

Very respectfully, your most obedient servant,

J. R. POINSETT.

Hon. L. WOODBURY,
Secretary of the Treasury.

U 11.

ENGINEER DEPARTMENT,

Washington, November 14, 1838.

SIR: I have the honor to submit, herewith, a statement in relation to steam-engines and steam-vessels owned or employed by the department, comprising such of the information called for by the letter of the Secretary of the Treasury, of October 30th, as can be furnished from the files of the office at the present date.

Very respectfully, sir, your obedient servant,

By order: FRED. A. SMITH,

Captain artillery.

Hon. J. R. POINSETT,

Secretary of War.

Statement of the number and kind of steam-engines in the employ, or owned by the United States Engineer Department; the number and description of steam-vessels, with the particulars called for by the letter of the Secretary of the Treasury of October 30, 1838, so far as they are to be obtained from the files of the office at the present date.

Where employed.	ENGINES.							
	Description.	Power, in horses.	For what purpose used.	When constructed.	Where constructed.	By whom constructed.	When put in operation.	Remarks.
1. Hudson river, above and below Albany	1 high pressure	15	–	1835	Albany	J. & J. Townsend	Oct. 26, 1835	No accidents have occurred.
Do.	1 do.	15	Excavating bed of the river.	1835	Do.	Do.	Aug. 22, 1836	
Do.	1 do.	15	–	1835	Do.	Do.	Aug. 24, 1836	
2. Baltimore	1 low pressure	–	Dredging harbor	1826	Baltimore	Watchman & Bratt	1826	No accidents.
3. Wilmington, Delaware	1 high pressure	10	Do.	1837	Wilmington	Bonney & Bush	July, 1837	No accidents.
4. Fort Schuyler, Throg's neck	1 steam engine.							
5. Fort Pulaski, Savannah	1 do.							
6. Savannah river	1 do.	–	Dredging channel					
Do.	1 do.	–	In tow-boat.					
7. Mobile harbor	1 do.	–	In dredge.					
8. Fort Delaware	1 do.	8	Pumping	–	Philadelphia	Rush & Muhlenberg	1834	A small hole was burnt in the bottom of one of the boilers.
Do.	2 do.	4	Pile-driving	–	Newcastle, Del.	Newcastle Man. Co.	1837	
Do.	2 do.	4	Pile-driving	–	Philadelphia	Rush & Muhlenberg	1837	

T 8.

Return respecting steam-engines used in steamboats in the district of Michilimackinac; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part, in feet and inches.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
			feet.		*ft.*										A.D.	
Pennsylvania.	Buffalo, Green Bay, & Chicago.	395 38	150	25 4	11	Erie, Pa.	1832	J. Richards.	William H. Bruce, Step'n A. Baldwin, John G. Ransom.	Lester H. Colton.	Wm. Burnett & Jacob Wolf.	180	High	Warden & Benny, Pittsburg, Pa.	1837	1 year.

COLLECTOR'S OFFICE, *Michilimackinac, September* 8, 1838.

ABRAHAM WENDELL, *Collector.*

U 13.

ORDNANCE OFFICE,
Washington, November 12, 1838.

SIR: Agreeably to the inquiries contained in the letter of the Secretary of the Treasury to the War Department, in relation to the use of steam-engines, and referred to this office, I have the honor to enclose copies of reports from Major Baker, Captain Bell, and Captain Huger, which contain all the information that can readily be obtained without incurring too much delay.

I have the honor to be, sir, your obedient servant,
By order: A. MORDECAI,
Captain Ordnance.

Hon. J. R. POINSETT,
Secretary of War.

U 14.

FORT MONROE ARSENAL,
November 7, 1838.

SIR: In reply to your letter of the 1st instant, which has just been received, I have to join to the following questions the annexed answers.

Question 1. Where is the engine used?

Answer. At Fort Monroe arsenal.

Question 2. For what purpose used?

Answer. For turning lathes, grindstones, and all the machinery used in working iron, and turning and sawing wood.

Question 3. What is its power, in horses?

Answer. At the highest working rate, say with a pressure of steam exceeding that of the atmosphere about four times, it is about 12 horse-power; but at the usual force it is worked, it is about equal to 6 horses.

Question 4. Whether high or low pressure?

Answer. High pressure.

Question 5. When constructed?

Answer. In the winter of 1836 and 1837.

Question 6. By whom constructed?

Answer. By Rush and Muhlenberg, Philadelphia.

Question 7. How long has it been in use?

Answer. Since February, 1837.

Question 8. If any accidents have occurred, what were the causes of those accidents, and what the extent of calamity they occasioned?

Answer. No accident has occurred.

I am, very respectfully, your obedient servant,
BENJ. HUGER,
Capt. Ordnance

Col. GEO. BOMFORD.

Ü 19.

Return respecting steam-engines used in steamboats in the district of Alexandria; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at the broadest part, in feet and inches.	Depth from spar-deck to keel, in feet and inches.	Where built.	When built.	By whom built.	Names of owners.	Names of masters.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine construct'd.	When engine constructed.	How long in use.
			ft. in.													
Jos. Johnson.	To Washington, and back.	114 30	98 0	18 6	6 9	Washington	1834	Wm. Lambell.	A. B. Waller and others.	Jos. Johnson.	W. Wathen	40	Low	Watchman and Bratt.	1835	3½ y'rs.
Phœnix -	To Washington, and back.	154 59	114 6	19 0	7 6	Alexandria	1838	Lambd'n & Stallings.	S. Shinn and others.	P. Jones -	Jas. Young	45	Low	Watchman and Bratt.	1837	6 mos.
Union -	Crossing the Potomac.	49 91	71 0	17 5	4 6	Washington	1837	W. Easby	Thomas Berry.	Jos. Fox -	Joseph Fox	12	High	Watchman and Bratt.	1837	1 year.

NOTE.—The Union is licensed by the corporation of Alexandria to run as a ferry-boat to the opposite shore of the Potomac. On the 12th July, 1837, (the day of her commencing to run,) when at the wharf, on the Maryland side, an accident happened, caused (as reported to me by her then commander) by defects in the construction of the boiler—the boiler not being socket-stayed, and the force-pump not being placed at the right end; on account of which, the bonnets of both flues blew out. By this accident, three persons were killed, viz: one white woman, (the wife of the engineer,) one colored woman, and one colored man, passengers. They were all dreadfully lacerated, and forced into the river. Three were wounded, but have all since recovered, viz: one white man, torn by splinters, and one colored man, scalded: both these were at work on the wharf; and one colored man (fireman on board) had his ankle broken. No liquor was used or kept on board, and all hands were perfectly sober. Master, at the time, James Harris; engineer, Edward Green; fireman, Elijah Allen; helmsman, Vincent Blackbush.

DISTRICT OF ALEXANDRIA, *Collector's Office, August* 23, 1838.

Return of steam-engines in use in the district of Georgetown, D. C., exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	
								y'rs.	mos.
Washington city -	U. States arsenal -	United States -	12	Driving divers mach'ry, such as turn'g lathes, tilt-hammer, &c.	High	1829	Francis Pratt, Pittsburg, Pa.	9	–
Washington city -	U. States navy yard -	United States -	60	Driving machinery and sawing timber.	High	1834	Rush & Muhlenberg, Philadelphia, Pa.	4	–
Washington city -	National Intelligencer office.	Gales & Seaton -	5	Driving print'g presses	High	1828	In Boston, by whom unknown.	9	6
Washington city -	Globe office - -	Blair & Rives -	5	Driving print'g presses	High	1834	W. Vellany, Albany, New York.	3	10
Alexandria aqueduct -	Potomac aqueduct -	Alexandria canal co. -	20	Pumping and excavating coffer-dams, &c.	High	1834	Watchman & Bratt, Baltimore.	4	–
Alexandria aqueduct -	Potomac aqueduct -	Alexandria canal co. -	20	Do. and sawing, &c.	High	1834	Thomas W. Smith, Alexandria.	4	–
Washington city -	Iron foundry -	Seraphim Share -	4	Working bellows -	High	1837	Watchman & Bratt, B.	1	–
Washington city -	White-lead factory -	John Purdy - -	10	Grinding and manufacturing white-lead.	High	1838	Thomas W. Smith, Alexandria.	–	5

Remarks.—It is said that no accident whatever has occurred to any of the engines herein described.

Note.—Three locomotives on Baltimore and Washington railroad, viz: Lafayette, P. E. Thomas, and J. W. Patterson, included in the returns from Baltimore.

COLLECTOR'S OFFICE, *Georgetown, (D. C.,) November*, 1838. THOS. TURNER, *Collector.*

V 1.

Abstract from returns respecting steamboats in each State; their number, character, tonnage, and power.

State.	Port or place.	Number of boats.			Tonnage of boats.			Power of engines, in horses.		
		High pressure.	Low pressure.	Total.	High pressure.	Low pressure.	Total.	High pressure.	Low pressure.	Total.
Maine - - -	Waldoboro' - -	1	–	1	67	–	67	45	–	45
	Bath - - -	3	2	5	233	551	784	58	220	278
	Portland - -	–	2	2	–	758	758	–	180	180
	Total in Maine -	4	4	8	300	1,309	1,609	103	400	503
New Hampshire -	Portsmouth - -	–	1	1	–	215	215	–	80	80
Vermont - -	Burlington - -	–	4	4	–	903	903	–	270	270
Massachusetts - -	Nantucket - -	–	1	1	–	171	171	–	60	60
	Fall River - -	–	1	1	–	169	169	–	40	40
	New Bedford - -	–	1	1	–	58	58	–	14	14
	Boston - -	–	9	9	–	1,045	1,045	–	321	321
	Total in Massachusetts	–	12	12	–	1,443	1,443	–	435	435
Rhode Island - -	Newport - -	–	1	1	–	211	211	–	40	40
	Providence - -	–	1	1	–	487	487	–	215	215

Connecticut	Fairfield	–	1	1	–	291	291	–	80	80
	New London	1	4	5	19	1,038	1,057	12	340	352
	New Haven	–	3	3	–	1,075	1,075	–	438	438
	Middletown	6	4	10	270	1,410	1,680	134	606	740
	Total in Connecticut	7	12	19	289	3,814	4,103	146	1,464	1,610
New York	Oswego	–	2	2	–	514	514	–	140	140
	Sackett's Harbor	–	8	8	–	987	987	–	231	231
	New York	9	73	112	1,498	21,192	22,690			
	Buffalo Creek	5	9	14	1,580	3,333	4,913	405	995	1,400
	Oswegatchie	2	2	4	92	512	604	24	150	174
	Total in New York	–	–	–	3,170	26,538	29,708	429	1,516	1,945
New Jersey	Perth Amboy	1	7	8	91	1,853	1,944	24	460	484
	Burlington	–	5	5	–	1,072	1,072	–	240	240
	Camden	–	6	6	–	444	444	–	140	140
	Newark	1	1	2	6	291	297	6	90	96
	Total in New Jersey	2	19	21	97	3,660	3,757	30	930	960
Pennsylvania	Presque Isle	1	2	3	120	925	1,045	50	400	450
	Pittsburg	108	–	108	12,961	–	12,961	9,132	–	9,132*
	Philadelphia	7	16	23	1,367	2,870	4,237	466	1,072	1,538†
	Total in Pennsylvania	116	18	134	14,448	3,795	18,243	9,648	1,472	11,120

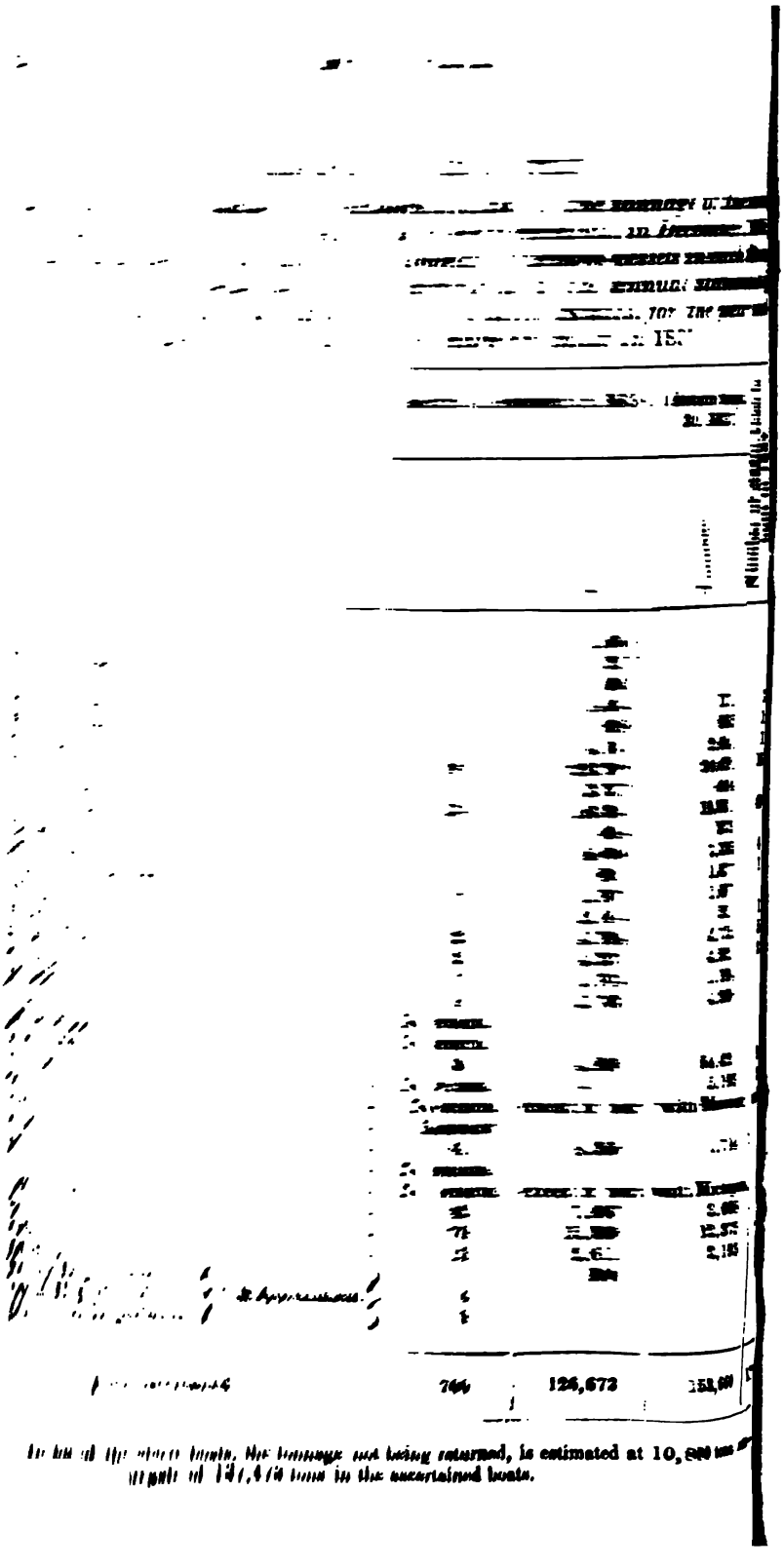
* No return of the power of the engine in one boat in return from Pittsburg.
† Including three boats employed on the Delaware and Schuylkill, which do not appear to have been licensed.

V 1—Continued.

State.	Port or place.	Number of boats.			Tonnage of boats.			Power of engines, in horses.		
		High pressure.	Low pressure.	Total.	High pressure.	Low pressure.	Total.	High pressure.	Low pressure.	Total.
Louisiana - -	New Orleans - -	29	1	30	4,986*					
Tennessee - -	Nashville.									
Kentucky - -	Louisville - -	41	None.	41	8,356	-	8,356	2,490	-	2,490
Missouri - -	St. Louis - -	42	-	42	7,967	-	7,967			
Illinois.										
Indiana.										
Ohio - - -	Sandusky - -	3	1	4	585	377	962	280	180	460
	Cuyahoga - -	8	1	9	3,351	579	3,930	1,204	225	1,429
	Miami - -	6	1	7	1,354	412	1,766	555	120	675
	Cincinnati - -	59	-	59	8,738	-	8,738	4,077	-	4,077†
	Total in Ohio -	76	3	79	14,028	1,368	15,396	6,116	525	6,641

	Detroit - -	6	5	12	509	1,662	2,216	212	506	718‡
	Total in Michigan -	7	5	13	904	1,662	2,611	392	506	898
Wisconsin.										
Iowa.										
United States - -	War Department -	-	-	4						
	Engineer Department -	5	1	9	-	-	-	70	-	70
	Navy Department -	-	1	1	-	900	900	-	500	500
	Total belonging to U. S. Government -	-	-	14						

* Tonnage of five boats not given.
† Tonnage of four boats not given.
‡ In respect to one boat of 45 tons burden, the power of the engine is not given, nor is it stated whether it is of high or low pressure.



In the above table, the tonnage not being returned, is estimated at 10,000 tons
imports of 141,470 tons in the ascertained boats.

V 2—Continued.

NOTE.

In the annual report on commerce and navigation, the tonnage of vessels which have been lost, broken up, or sold to foreigners, is frequently included in the total amount, owing to the collectors and surveyors of ports not being duly informed of the fate of the vessels. This tends to swell the amount of tonnage reported beyond the amount in actual use. While, on the other hand, as many boats which ply between different ports in the same State are neither licensed nor enrolled, the records of the custom-houses do not give the full amount of tonnage employed in steam navigation.

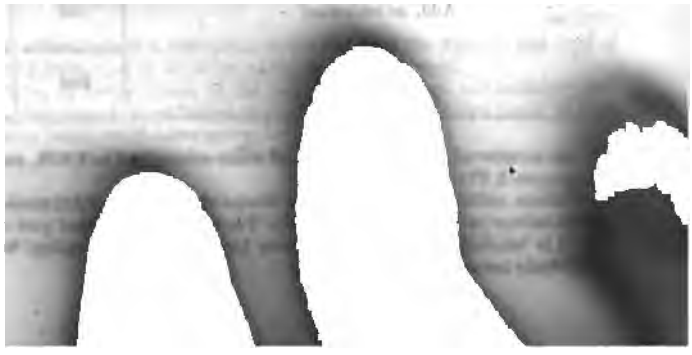
Through want of time, the collectors and surveyors have not been able to make the complete returns called for by the special resolution of Congress. The number of boats and the amount of tonnage are known to be greater than is stated in the second and third columns of this table; but how much greater, must be matter of conjecture. The estimate is, that 100 boats have not been returned; which, at 200 tons each, would be 20,000 tons more, or 157,473 in the aggregate.

The whole number of vessels reported to have been built in the United States, between September 30, 1836, and September 30, 1837, was 948; of which 134 were steam-vessels.

According to a publication by the Liverpool Statistical Society, the number of steam-vessels belonging to the British empire in 1836 was 600, and their burden was 67,969 tons. This includes vessels belonging to the colonies, as well as vessels belonging to the mother country.

A table of their estimate, for several years, is annexed:

Year.	Vessels.	Tonnage.	Year.	Vessels.	Tonnage.
1814	2	456	1826	248	28,958
1815	10	1,633	1827	275	32,490
1816	15	2,612	1828	293	32,032
1817	19	3,950	1829	304	32,283
1818	27	6,441	1830	315	33,444
1819	32	6,657	1831	347	37,445
1820	43	7,243	1832	380	41,669
1821	69	10,534	1833	415	45,017
1822	96	13,125	1834	462	50,736
1823	111	14,153	1835	538	60,520
1824	126	15,739	1836	600	67,969
1825	168	20,287			



V 3.

Abstract from returns respecting steamboats, locomotives, and stationary engines.

	Number of steamboats.	Number of locomotives.	Number of stationary engines.
Maine	8	2	41
New Hampshire	1	—	6
Vermont	4		
Massachusetts	12	37	165
Rhode Island	2	—	58
Connecticut	19	6	47
New York	140	28	87
New Jersey	21	32	32
Pennsylvania	134	96	393
Delaware	3	14	11
Maryland	19	31	56
District of Columbia	5	—	13
Virginia	16	34	194
North Carolina	11	5	20
South Carolina	22	27	40
Georgia	29	3	23
Florida	17	2	8
Alabama	18	1	40
Louisiana	30	10	274
Arkansas.			
Mississippi.			
Tennessee.			
Kentucky, (including part of Indiana,)	41	2	
Missouri and Illinois	42	—	56
Indiana, (included, in part, in Kentucky.)			
Ohio	79	1	83
Michigan and Wisconsin (in part)	13	6	33
Iowa.			
United States Government	14	—	17
Total ascertained	700	337	1,616
Add, as estimated	100	13	244
Aggregate	800	350	1,860

Whole number of steam-engines of all kinds ascertained is 2,653, and estimated 357; making the aggregate 3,010.

The above estimate is added for the States of Tennessee, Arkansas, Illinois, Indiana, and some omissions in other States, with the Territory of Iowa, and part of Wisconsin. In New York, it is believed that one or two more locomotives are running, but I have not yet been able to obtain accurate returns of them.

V 3—Continued.

NOTE.

The returns respecting locomotives are believed to embrace nearly all in the country. Those respecting stationary engines are incomplete, no returns having been received from extensive districts, in which, it is believed, many such engines are in use. The returns respecting steamboats are incomplete in regard to number and tonnage of boats, and power of engines.

Of the whole number of steamboats, respecting which returns have been received, 351 are in use on the waters of the Atlantic and Gulf of Mexico, 64 on the great Northwestern lakes, and 285 on the waters of the Mississippi valley, viz:

	High pressure.	Low pressure.	Not known.
Atlantic and Gulf of Mexico -	92	222	37
Northwestern lakes - - -	32	31	1
Mississippi valley - - -	284	1	
Total - - -	408	254	38

Tonnage, so far as returned.

	High pressure.	Low pressure.	Total.
Atlantic and Gulf of Mexico - - -	10,477	55,469	65,946
Northwestern lakes - - - -	7,986	9,301	17,332
Mississippi valley - - - -	43,440	–	35,084
Tons	61,903	64,770	126,673

No returns were made of the tonnage of 45 boats on the waters of the Atlantic, nor of the tonnage of 9 boats on the Mississippi and Ohio. The character of the engine of one small boat on the Northwestern lakes is not mentioned in the returns; this would require an addition to the tonnage of the 54 ascertained boats, estimated at 200 tons each, of - - - - - - - - - 10,800

Making a probable aggregate, in all the ascertained boats, equal to Tons 137,473

Horse-power, so far as returned.

	High pressure.	Low pressure.	Total.
Atlantic and Gulf of Mexico - - -	2,927	10,391	13,318
Northwestern lakes - - -	2,910	2,947	5,857
Mississippi valley - - -	15,934	–	15,934
Total - - -	21,771	13,338	35,109

Estimated for the 213 boats, hereafter explained, in which the horse-power was not returned, at 70 for each boat, (and which is not far from the average,) in the U. S. 14,910

Making an aggregate of horse-power, in the 700 boats returned, equal to - 50,019

Add, for 100 boats computed not to be returned, but whose horse-power is estimated at 70 each - - - - - - - - - 7,000

Ascertained and estimated total of horse-power in boats - - 57,019

No returns of the power of the engines in 139 boats on the waters of the Atlantic and Gulf of Mexico, of 1 on the Western lakes, and of 73 in the valley of the Mississippi.

No returns have been given, in several cases, of the power of locomotives and stationary engines. In the latter cases, they have been estimated on the data of about 20-horse power to each engine on an average; and in boats, at 70-horse power for each.

The tonnage of boats has, when not returned accurately, been estimated on an average at 200 tons.

In several instances in the returns, the boats and locomotives are included twice, by different collectors. But wherever this has been detected, (and it is believed to have been so in most cases,) proper allowance and correction have taken place.

V 4.

LOCOMOTIVE STEAM-ENGINES IN EACH STATE.

Locomotives and railroad engines.

States.	Number.	Power.	Period when first introduced into use in the State.
Maine	2	20	1836
New Hampshire	None returned.	None returned.	
Massachusetts	37	1,130	1832
Connecticut.*			
Rhode Island	6	200	1837
Vermont	None returned.	None returned.	
New York	28	560	1832
New Jersey	32	640	1832
Pennsylvania	96	1,920	1832
Delaware	14	280	1831
Maryland	31	520	1833
District of Columbia†			
Virginia	34	397	1834
North Carolina	5	68	1836
South Carolina	27	347	1833
Georgia	3	60	1837
Florida	2	24	1838
Alabama	1	36	1837
Louisiana	10	276	1832
Indiana, Missouri, and Illinois	None returned.	None returned.	
Ohio	1	40	1838
Michigan	6	182	1836
Tennessee	None returned.	None returned.	
Kentucky	2	20	
Wisconsin and Iowa	None returned.	None returned.	
Aggregate returned	337	6,720	
Add as an estimate for those not returned	13	260	
Total	350	6,980	

* The locomotives on the Stonington and Providence railroad are returned to the State of Rhode Island.

† Those on the Baltimore and Washington branch railroad are included under the Maryland returns.

V 5.

STANDING STEAM-ENGINES IN EACH STATE.

Standing engines.

States.	Number.	Power.	Period when first introduced into use in the State.
Maine	41	765	1833
New Hampshire	6	102	1833
Massachusetts	165	2,244	1827
Connecticut	47	315	1830
Rhode Island	58	1,430	1828
Vermont	None returned.	None returned.	
New York	87	1,425	
New Jersey	32	516	1787 to 1834
Pennsylvania	383	7,448	1791 to 1810
Delaware	11	88	1825
Maryland	56	683	1818
District of Columbia	13	206	1827
Virginia	124	1,567	1821
North Carolina	20	751	1821
South Carolina	40	675	1819
Georgia	23	799	1827
Florida	8	215	1833
Alabama*	40	800	
Louisiana	274	7,796	1821
Missouri and Illinois, in part	56	1,120	1837 and 1838
Ohio	83	1,786	1828
Michigan	32	368	1828
Tennessee, Indiana, and Kentucky	None specifically returned.	None specifically returned.	
Wisconsin and Iowa	None specifically returned.	None specifically returned.	
United States Government	17	340	
	1,616	31,439	
Add standing engines not returned, but estimated	244	4,880	
Total	1,860	36,319	

* These are, in some degree, estimated by the collector.

W 1.

NOVEMBER 25, 1838.

SIR: I received some time since a copy of a circular addressed to myself, among others; also, an annexed copy of an act of Congress "to provide for the better security of the lives of passengers on board of vessels propelled, in whole or in part, by steam."

You request that I shall mention such amendments to this act, or state such other suggestions tending to promote the objects of the act, as it may be convenient to me to communicate.

Among the more practicable provisions against fire, is that which was resorted to by Messrs. Stevens, of having a great number of fire-buckets supplied with water, constantly suspended in an accessible situation.* In winter, brine was employed to avoid congelation. More than ten years since, I proposed, in an article communicated for the Franklin Journal, that there should be a forcing-pump, so associated with the steam-engine as that it might be brought into action by a slight movement, such as is usually employed in mill-work to throw any part of the machinery into gear. By such a pump, a torrent of water might be delivered from pipes properly situated. I would have a pipe communicating with the pump, to extend along the gunwale both fore and aft, provided at intervals with cocks, with hose terminating in a jet-pipe, wound upon a reel, so that, by means of any one of these hoses, a jet of water might, in a few seconds, be directed upon any part of the vessel which should take fire. The pump, thus contrived to secure a boat from fire, might prove a means of safety in case of leakage, by removing water from the hold. But, to guard against both the evils of fire and of a leak, when the steam-engine may be incapacitated from working, I would advise an additional pump, placed conveniently, which should serve either to remove water from the hold, or to throw it upon any fire which might break out. To qualify a pair of suction-pumps for this last-mentioned object, it is only necessary to have the pistons to pass through stuffing boxes, and an air vessel between the chambers to receive the water and equalize its efflux. A nozzle, proceeding from the air vessel, should have a hose upon a reel, from which it might at any time be rapidly disengaged. The construction of the pumps should be of a kind well approved of by the inspectors, judging by the actual performance in sustaining, when fully moved, a jet of a certain height, through an orifice of a certain diameter; of course, the dimensions of the pumps and all their appurtenances should vary proportionably to the size of the boat. There should also be a larger orifice for ordinary use, susceptible of being easily closed when that of the air vessel is to be employed.

It might also be expedient that the suction-pipe of the pumps should have two branches: one going to the bottom of the hold; the other communicating with the water on the outside of the boat; so that, by means of a large cock, and the movement of a lever through a quarter of a circle, a communication might be opened with either branch, closing at the same time the other.

* This precaution was recommended by me in a letter to Dr. T. P. Jones, editor of the Franklin Journal, about 10 years ago.—See Franklin Journal, vol. 2, page 186.

Some years ago I proposed, in an article in the National Gazette, that the boilers of our steamboats should be so situated as that there should be the least injury in case of explosion.

When two boilers are placed one on each end of the beam, (agreeably to the plan first resorted to, as I believe, by Messrs. Stevens of Hoboken, New York,) in case of explosion it appears to me that passengers in the cabin are not liable to be injured. Only those about midships are much exposed to the consequences of an explosion. Fore and aft there can be but little danger, comparatively. With her boilers near the beam-ends, if the vessel be made of a due degree of strength, it is not to me conceivable that the hull can be so injured, as in the case of the Pulaski, as to incapacitate it from floating. Another danger is avoided by the position of the boilers which I have mentioned. In consequence of the escape of the water into the fire-place, as well as the previous pressure to which it has been exposed, a prodigious quantity of scalding vapor and air must be given out. The boiler being in the hold, the cabins must become filled with a scalding irrespirable atmosphere. But, when the boiler is on or beyond the beam, there is so much room for the escape of the hot steam and air, that it cannot be productive of much mischief.

About the year 1828 it occurred to me that, as explosions would probably always ensue to a greater or less extent, it would be advisable not only to have the boilers in the situation less likely to be injurious, but also to have some defence so interposed that the explosive force would be constrained to act altogether towards the exterior of the steamboat. An explosion evidently will prove most effectual on the weakest side, as in the case of a loaded cannon, the charge of which, when ignited, drives forth a ball without injury to those in the rear.

Supposing that the timbers and planking of a boat were carried up to the height of six or eight feet above the deck, and that cross-beams alternating with the timbers were to be extended duly beyond the sides: a platform might thus be made on each side, by which the boilers might be supported, beyond the timbers and planking, outside of the vessel. There might be a door-way near each end of the platform, opening a communication between it and the decks of the boat, with a door so swung as to serve as a valve, opening towards the platform, and closing towards the deck upon a rabbet or bevel. The platform might be protected from the weather by three leaves turning upon hinges attached to the edges of the platform, and fitted to each other by bevel or mitre joints, coming together close when in a vertical position. Upon the three leaves, when situated as described, a canopy might be made to fit so as to prevent them from separating, as they might all enter it to a certain distance. The canopy itself might be secured by a chain or rope passing outside of the platform to the hull.

Let us call the cavity, constituted as described, a boiler-house. The side of this cavity, formed by the planking and beams of the steamer, should be fortified by iron or copper sheeting, so as to be fire-proof. The floor of the platform might be formed of cast-iron plates, and the fire-place of the same material. Thus constructed, no fire could ever be communicated from the boiler-house to the interior of the vessel. Both the leaves and the canopy might also be sheathed with copper or iron, well varnished or painted. Indeed, they might be made altogether of these metals, and, in case of an explosion, the canopy being lifted, the three

leaves, no longer held together, would fall apart by revolving on their hinges; and thus would neither sustain nor impart any injury.* The chain attached to the canopy would, even if parted, give it a motion outwards, which would prevent it from coming on board.

Subsequently to the publication in the National Gazette above alluded to, a person called upon me to state that he had taken out a patent for a plan of placing the boilers of steamboats in a situation to render their explosion harmless to passengers. My friend, Professor Silliman, also appears to have suggested an analogous expedient. The construction thus proposed would, as I conceive, be quite suitable for inland navigation. I do not conceive that, on the high seas, it could be elevated, even in a vessel of two thousand tons, so as to be beyond the reach of the waves. Presuming, therefore, that the boilers would, under such circumstances, have to be in the hold, I would place them in a cavity of very great strength. This would be best accomplished by having one or more cylindrical boilers in an upright position, and each having concentric flues within them. Two such boilers might at the upper extremity open into another steam-cylinder, dome-shaped at bottom and top, and so arranged as always to contain one-third of its contents of water, and consequently to keep the others full. In like manner, four cylindrical boilers might communicate with the steam-cylinder.

The enclosure might be made of wooden planks, so curved as to form, by splicing, pinning, riveting, or screwing, a circular cylinder. Several layers of inch plank might be so applied, one upon the other, each successive layer breaking joint with that preceding, as to form on a large scale a drum analogous to a Hingham bucket. The whole should be lined with sheet-iron, and, if desirable, strengthened by iron hoops. The external cylinder thus constructed, should extend from six to ten feet above the deck; doors or valves being left for the introduction of fuel, the clearing of the fire-grate, or the removal of ashes.

The object of this enclosure must be evidently to cause any explosive force to be expended in a vertical direction, instead of operating horizontally, so as to pass through the cabins or over the decks. The doors or valves should all be so hung as to close in obedience to any pressure upon them from within.

Could the fire be confined altogether to the inner cylinder of the boilers, there would be scarcely any other part which could give way, either from undue heating of the fire surface, or a regular but excessive increase of the pressure. Any explosion so occurring evidently could not act in a horizontal direction, but would be expended vertically. There has been an objection to such flues, on account of their liability to collapse; but this, no doubt, may be sufficiently prevented by having a sufficient number of ties between the inner cylinder, forming the flue, and the outer one of the same boiler. When in a horizontal position, so far as productive of explosions, their weakness has been a source of great mischief, which could

* For a confirmation of my anticipations that, under the circumstances suggested, a harmless dislodgement of the boiler would ensue, I refer to an article in the Franklin Journal for 1829, in which an account is given of a boiler being projected two hundred yards into the Monongahela, without injury to the building on the outside of which it was previously situated under a light shed. No other damage was sustained, excepting that arising from the loss of the boiler, and the dislodgement of three others with which it had been associated.

not take place, unless in a comparatively inconsiderable degree, when they are in a vertical boiler.

The only consideration which causes me to feel any diffidence respecting the employment of vertical boilers, is a doubt whether fire would be as efficacious when confined in its action to the inner surface, and acting laterally, as in the usual mode of employing it. Should a resort to boilers in the usual form be found preferable, still the plan of surrounding them by an enclosure of great strength would seem to me advisable.

I have no doubt but that the most frequent cause of explosions in steam-engine boilers is the undue heating of the metallic material of which they are made, in consequence of a deficiency of water. The generation of an explosive mixture by the evolution of hydrogen from water has been pertinaciously urged by some persons to be a frequent cause of the explosion of steam-engine boilers; but every well-informed chemist knows that in copper boilers hydrogen could not be generated, and that in iron boilers its generation would require a heat of which the consequent pressure would be irresistible by the strongest vessels, especially as the tenacity of the metal would be much lessened; that if hydrogen were generated, it could not explode *per se;* that the only imaginable agent which could enable it to explode would be the atmospheric oxygen, which could have no adequate access; that if atmospheric air were present, the intermixture of the steam would so impair its efficacy that inflammation could scarcely ensue, and that, of course, no explosion could take place.

But the same ignorance which has suggested a cause which cannot exist, has caused another to be undervalued, of which the existence is demonstrable—I mean that of iron at or near a red heat. The power of iron to produce with water an explosive reaction, is well illustrated by striking a red-hot iron upon an anvil, some moisture being previously interposed. Whenever any hollow massive piece of iron with an opening sufficient to allow the water to enter the cavity is thrown into water, an explosive reaction may be observed.

It being thus established that the contact of iron and water at a certain temperature is competent to the production of an explosive evolution of steam, it follows that if the quantity of water be reduced so as to allow a great part of the fire surface to become red-hot by its consequent unprotected exposure, and at the same time the pressure of the steam on the safety-valve becomes sufficient to lift it, the water will rise in foam as soon as the lifting of the valve permits an escape of steam. The aqueous foam coming in contact with the red-hot metal must be vaporized with an explosive rapidity. This result will also take place if the valve be lifted with a view of moderating the pressure, or in case the pump for the supplying of the water be put into operation after having been allowed to remain idle. Still more is the consequence described likely to ensue when there are two or more boilers communicating below; so that, by the careening of the vessel, from a rush of passengers first towards one side and then towards the other, or any other cause, the cavity of a boiler being first partially depleted of water, becomes afterwards suddenly replenished with it.

To guard against this, it would seem to me expedient that a valve or cock should be so associated with a float, that whenever the surface of the water should be reduced below the proper level, this cock or valve should

V 1—Continued.

State.	Port or place.	Number of boats.			Tonnage of boats.			Power of engines, in horses.		
		High pressure.	Low pressure.	Total.	High pressure.	Low pressure.	Total.	High pressure.	Low pressure.	Total.
Louisiana	New Orleans	29	1	30	4,986*					
Tennessee	Nashville.									
Kentucky	Louisville	41	None.	41	8,356	–	8,356	2,490	–	2,490
Missouri	St. Louis	42	–	42	7,967	–	7,967			
Illinois.										
Indiana.										
Ohio	Sandusky	3	1	4	585	377	962	280	180	460
	Cuyahoga	8	1	9	3,351	579	3,930	1,204	225	1,429
	Miami	6	1	7	1,354	412	1,766	555	120	675
	Cincinnati	59	–	59	8,738	–	8,738	4,077	–	4,077†
	Total in Ohio	76	3	79	14,028	1,368	15,396	6,116	525	6,641

rise whenever the pressure should exceed the proper degree. In addition to this, I proposed that the boilers should be periodically proved by raising the steam in them to a pressure one half higher than that which would be requisite to lift the valve under its permanent load.

Nothing would, in my opinion, tend more to lessen the evils of which the removal is contemplated by the act, than the discouragement by all legal means of the use of high steam in passenger-boats. Since, by mismanagement, any boiler may explode, and consequently some accidents have happened in boats employing low-pressure engines, it has been argued that the danger is no greater from high than from low steam; but, evidently, the force of the explosion, whenever it takes place, must be greater in proportion to the previous pressure. In the use of a boiler with a sufficiently large valve moderately loaded, and so situated that it cannot be subjected to additional weight or other impediment to its rising, I cannot conceive any circumstances under which an explosion can ensue, unless those already mentioned, in which, the boiler being unduly depleted, and the metal forming it rendered red-hot by the lifting of the valve, its sudden replenishment with water, or the rising of this liquid in foam, an explosive generation of steam should ensue; but against this source of danger I have already suggested the means of security, and, in any case, such a result would, in the use of a low-pressure boiler, be less deleterious than where high steam is used. The greater strength of the boilers of the kind last mentioned prevents them from yielding until the explosive force becomes enormous; so that, when explosion does occur, the most dreadful mutilation and carnage, as well as scalding, is the usual consequence.

It may be proper to point out the fact, that those who defend the use of high steam are wont to treat all condensing engines as working by low-pressure, whereas many in which condensation is used may be considered as intermediate in their pressure between the old-fashioned condensing engine of Watt, and the purely high steam-engine of Oliver Evans and others.

I have understood that a condensing engine was used on board the Pulaski, yet it was mentioned that she used a pressure of twenty-eight pounds to the square inch, nearly equal to a vertical column of water of sixty feet in height; on the other hand, we are informed that the engines of the Great Western are impelled by a pressure not exceeding three and one half pounds to the square inch. If there be no error in this, it follows, in my opinion, that steamboats ought not to use more than five pounds of pressure for each square inch in the superficies of the safety-valve. The high-pressure condensing engines (to which I have alluded) are now, I believe, pretty generally used in this country, when the purely high-pressure engine is not employed. The steam is allowed to act upon the piston only during a part of the stroke, so that, by the time the stroke is completed, the pressure of the steam is reduced nearly to that of the atmosphere. Thus the work which the condenser has to perform is not augmented, while an increased activity is given to the piston. I am aware that there is an advantage in this mode of employing steam, but I doubt if it be sufficient to compensate the increase of danger. To effect a change in this respect may be difficult, but, in order that people may judge for themselves, I would suggest that a mercurial gauge should be placed conspicuously in each boat, showing the pressure employed.

Should a safety-valve, loaded by the inspectors, be required, and the

boiler proved as proposed, the proper pressure on the valve might be stated, in large letters, in some conspicuous situation. For exceeding this pressure a heavy penalty should be imposed, and liability to pay all damages sustained by the sufferers. The increase of this pressure, in consequence of the approach of a boat, should especially be made highly penal.

The construction of the steam-gauge, for the inspection of passengers, should be fixed by law, and subject to the examination of the inspectors; any attempt to falsify the indication to be criminal.

It is conceived that the precautions thus advised would remove one of the greatest dangers, by the prevention of racing.

It is, I conceive, to the employment of a higher pressure that the greater frequency of the explosions on the Western waters, when compared with the steamers of New York, Philadelphia, and Baltimore, is to be attributed.

About twenty years ago, two high-pressure steamers, the Pennsylvania and the Etna, with engines constructed by Evans, were put upon the route from Philadelphia to Bordentown. It was never without anxiety that I ventured on board of these boats. I used to say that I felt much as if the hold were replete with enchained tigers, incessantly striving to break loose and rush upon the passengers and crew. As respects myself, I had not the ill fortune to have my fears realized, although the last time I made a passage in the Etna she was so crowded both with cabin and steerage passengers as scarcely to leave any unoccupied space. Fortunately, the catastrophe which I had always feared did not then occur; but early in the following season, when the same boat was plying between South Amboy and New York, her boiler exploded with such violence as to scald, wound, or blow into the water, a majority of those on board.

Generally, the steamers employed by Fulton and Livingston, and those subsequently employed on the same route by the Messrs. Stevens, have gone free from accidents, and, when they have occurred, they have been comparatively productive of trifling injury.

On this subject I speak from memory, but I would suggest to you that it might be expedient to put queries to Messrs. Stevens, and to the masters of their boats, respecting the number of accidents which have occurred on the routes between New York and Albany, or the same city and the various New England ports. The elder Jenkins and Bunker have especially had great experience.

I think the result of an inquiry would be, that any advantage resulting from the employment of high steam has been dearly bought.

I am, sir, with the utmost due respect, your obedient servant,

ROBERT HARE.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

W 2.

NEW HAVEN, *September* 28, 1838.

SIR: In reply to your official circular, I remark on the securities for steam-boats, the act embraces many important provisions; the following however, occur to me as salutary alterations or additions:

1. Compensation to the inspectors (sections 4 and 5) appears to me

entirely inadequate to command the talents, skill, knowledge, and devotion which so important a duty demands, involving also a high responsibility—nothing less than the endorsing over to the community of the safety of steam-vessels, both in their naval architecture and steam machinery. If, at first, patriotism and moral feeling induce men of high character to act in the affair, there is danger that a compensation so trivial will eventually turn the duty over to men cheap enough indeed, and who may be bought by those interested, while they have been so poorly paid by Government, or by its order.

2. With respect to these sections, and the 6th, on engineers, it appears to me that there should be, in every principal port, maritime and inland, a board composed of men of the highest standing, both in the science and practice of steam navigation, whose character and position place them above suspicion, and whose compensation from Government (not from those interested) should place them equally beyond temptation; who should be invested with plenary powers, and by whom captains and engineers should be examined and licensed; and both the boats and the engineers should be under the control of this board. The present provision may serve as a beginning, but it is believed it will not work well for a long time.

3. Section 8.—I should prefer three and four instead of two and three boats, and they should be kept with water *in* them, or otherwise be proved to be always serviceable: they may be often put afloat.

4. Section 9.—In addition to the iron chains for steering, there should be a serviceable tiller, and room to work it as a lever by hand: since the chains may break, or the wheel-house become untenantable in consequence of being on fire.

5. Every boat should be furnished with life-preservers adequate to the entire number of passengers. The cost is trifling, and they may be wanted as much against the dangers of the boats after leaving the principal vessel, as against her own disasters.

6. There should be a penalty for falsifying the gauge, which is said to be sometimes done by cutting off the dancing rod that floats on the mercury.

7. Boats should be prohibited from carrying over a certain amount of pressure, as measured by the gauge; or,

8. Perhaps the same object may be attained by a double valve, or a fusible plug.

Remark.—After all, every thing depends upon the intelligence, vigilance, fidelity, and moral feeling of the captain and engineers; and hence the importance of a full control vested in a proper board.

Railroads are not within the view of the act; but it is respectfully suggested that they ought to be placed under statute regulation; and stage-coaches are also much in want of similar efficient regulation.

I remain, respectfully, your very obedient servant,

B. SILLIMAN.

Hon. LEVI WOODBURY,
Secretary of the Treasury of the U. S.

W 3.

PHILADELPHIA,

South Ninth street, No. 200, November 3, 1838.

SIR: On the 1st instant I was honored with one of your circulars of August 28th, respecting the means to guard against accidents that result from the mismanagement of steam in its application to vessels, &c.

Permit me to suggest for your consideration the propriety of adding the following additions to the law:

Insurance.—When a steamboat is injured by the bursting of any of her boilers or steam-pipes, insurance offices shall not be liable for the damages that resulted, direct or indirectly, to the boat, her stores, or apparel.

Gambling.—The captain, officers, and crew, the pilots and engineers, should all be prohibited from gambling on board the boat. The interdiction should be general and explicit. The captain, mate, and boat made responsible for all breaches of the law—the boat liable for one-half of the penalty and costs of suit, the captain for one-quarter, and the crew for the other quarter of the fine and costs. The captain authorized to detain out of the crews' wages their quarter; and if any of the crew were to gamble for the purpose of bringing trouble on the boat, captain, and the crew, such gambler, convicted thereof, to be subject to three months' imprisonment.

Drink and drunkenness are the sources of great danger. It is difficult to apply remedies to these causes, from the difficulty of fixing any specific point at which illegal drunkenness may be said to commence. But as the proviso or condition of all insurances being forfeited, &c., would throw on the boat-owners all the losses that resulted from burstings of boilers and conducting pipes, the stake that owners had in the boilers would, in general, induce them to look after the character and conduct of the captains, engineers, and pilots. Perhaps the captain and engineers might be made liable to a fine in cases of explosion. All the wood-work that is exposed to fire, or in the neighborhood of the fires, kitchens, &c., should be coated some two or three times each year with whitewash made from fresh-slacked lime; the lime, held in solution by the water, enters the wood; the water evaporates, the lime remains in the wood, and lessens its combustibility to great extent. The practice would be more general if the benefits were better understood; it adds to the hardness and durability of the timber and boards.

The mechanical provisions contained in the law, if carried out, will do good; still they will be greatly aided by the moral provisions proposed, or some other that will secure the same end—carefulness on the part of all who are connected with the boat as owners, officers, and crew.

The references contained in this letter are drawn from direct observation as regards gaming and drinking.

I am, very respectfully,

JAMES RONALDSON.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

W 4.

COLUMBIA COLLEGE,
New York, September 19, 1838.

SIR: I had the honor to receive your circular of the 28th ultimo, and should have acknowledged its receipt at an earlier date, had I not, in an interview with the collector of this port, stated to him, for your information, that I should give the subject the consideration its importance merits, and should communicate with you in due time. I also stated, that, having accepted an appointment to examine such apparatus as might be offered as a security from the explosions of steam-boilers, I should probably have an opportunity of giving more satisfactory and complete information than I have at present in my power. Being, however, urged by the collector to communicate to you my present views, I beg leave to lay them before you, reserving the privilege of adding, at a future period, such new views as the investigation on which I am about to enter may bring forth.

Passing over the three first sections of the law, I have to remark, in respect to the 4th, that it appears to contain every provision which is necessary for ensuring the sea-worthiness of the vessel, provided the inspectors appointed be competent to their duty. It is, however, to be remarked, that, with the exception of the Natchez, I know of no steam-vessel yet built in the United States, which is adapted to the navigation of the ocean, the lakes, or of such arms of the sea as Long Island sound and the Chesapeake. I should consider no vessel competent to navigate such waters with safety, unless a spar-deck from stem to stern were substituted for the dangerous and open structures which are now used as cabins, and unless such a system of diagonal bracing were introduced as should effectually prevent any change of figure in the vessel from the unequal bearing of the water on its several sections.

The 5th section of the law I conceive to be wholly inadequate to the intended purpose, and, in its actual provisions, worse than useless. The duty of the inspectors has reference merely to the soundness and age of the boilers. Now, an old and unsound boiler is not, on that account, more liable to explosion; and its very weakness may be a source of safety. Such boilers are never intentionally subjected to extreme pressure; and, in the innumerable instances in which they have given way, have never done any injury other than scalding persons in the immediate neighborhood. Still, it may be well to avoid even this danger, and the words of the section may be retained; but I would propose to introduce a clause to the following effect, viz:

"He, or they, shall also examine and certify whether the said boilers be provided with proper and sufficient safety and feeding apparatus; among which shall be included two safety valves, one of which shall be loaded with a weight of not more than one-half of what the said boiler shall have been proven by steam to be able to bear, and shall be so arranged that its weight may be locked up by the said inspector or inspectors, and be thus placed beyond the control of any person concerned in the management of the vessel or engine; one fusible metal valve, so tempered as to give way at a temperature 40° of Fahrenheit's thermometer higher than that corresponding to the force of steam at which the safety-valves locked up shall open, and which, in the case of vessels navigating

the sea or great lakes, shall be furnished with the apparatus invented by Professor Bache of Philadelphia;* a damper to each boiler, by which the draught of the chimney may be effectually choked; and, in addition to a sufficient feeding apparatus worked by the engine, a force-pump which may be worked by hand."

Section 6, when taken in connexion with section 13, contains every necessary provision.

Section 7 will be rendered nugatory if the addition suggested to section 5 be adopted, by the use of a safety-valve whose load is beyond the control of the persons in the vessel. For this I would substitute—

"It shall be the duty of the master of any boat or vessel, &c., to open, or cause to be opened, the safety-valve whose load is prescribed and locked up by the inspectors, at least once in every twenty-four hours, for the purpose of preventing its becoming rusted to its seat; and whenever the engine of said boat or vessel shall be stopped for the purpose of discharging or taking in cargo, fuel, or passengers, he or they shall previously cause to be injected into the boiler such extra supply of water as may ensure that its level shall not fall, during the time of such stoppage, below the limit determined by the lower gauge-cock; and, in case of an unexpected delay, by which the water shall be depressed to this limit, he shall then, either by the action of the engine, or by the use of the hand force-pump, cause the boiler to be replenished with water; and it shall further bé his or their duty to cause the damper or dampers to be closed during such stoppage."

In section 8, after the words "twenty persons," I would suggest the insertion of the following: "and such boats shall be built and fitted after the manner of life-boats, so as to be incapable of sinking when loaded with the greatest number of passengers they can carry." And at the end, "It shall be the duty of the inspector or inspectors, for whose appointment provision has been made in section 3, to examine the said boats, and to certify, in the manner therein prescribed, whether, in his or their opinion, the said boats are, in all respects, adapted to the proposed purpose."

To section 9 I have no additions to propose.

I have seen it remarked, that the provisions of section 10 are less complete than those contained in the statute of this State. It would be well that it should be referred to, and, if better, adopted.

Sections 11 and 12 require no remark, except that there can be no doubt of their strict justice.

In relation to section 13, I have to state, that it appears to me to be the most important and valuable provision of the whole law. In the course of the inquiries which it has been my task to make into the explosions which have been attended with loss of life, I have been able to discover no instance which cannot be traced to ignorance, culpable negligence, or foolhardiness. The time is past when the first of these can be received as a satisfactory excuse; the causes whence dangerous explosions arise seem to be now fully understood; and what but a few years since might have been considered as an inevitable misfortune, can now be foreseen and guarded against. I would further remark, that the principle adopted in the law, of deriving the compensation of the inspectors from the proprietors of the

* This apparatus does away the necessity of stopping the engine in case the fusible metal should give way.

vessels, is a bad one. Even although the sum is fixed, and the times of inspection defined, the inspector is left to collect his fee as he may. If the principle of fees be retained, they ought to be collected at the custom-houses on the delivery or renewal of the licenses. I am also of opinion that the fee provided by the law is insufficient to secure the service of competent persons.

I have the honor to be, with much respect, your obedient servant,

JAMES RENWICK.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

W 5.

WASHINGTON, *November* 27, 1838.

SIR: The same reasons that have deterred many individuals of high scientific attainments and practical knowledge from answering your circular of August the 28th, asking for information in regard to the causes and preventives of the explosion of steam-boilers, have deterred me from giving it that attention which the subject demands. Conceiving the time allotted by the resolutions of the last Congress for the investigation of this very important subject too short to do it justice, or to obtain correct and suitable information for any future legislation, whereby the travelling community may be rendered more secure and safe, has prevented many men of great skill from advancing their opinion, for the want of the time necessary to enable them to examine more minutely the many important improvements that have been made in steam navigation within the last few years; but having confidence in the wisdom of our Legislature that they wil not cease their inquiries, or the enactment of such laws as may seem to have a tendency to operate for the safety of the lives and property of individuals; and feeling it a duty to contribute my mite to the common stock, for the preservation of my fellow-citizens, I have the honor to lay before you a brief statement of my views upon the causes of the explosion of steam-boilers, and of the mode of prevention which seems the best adapted to the present plan of constructing steam-engines.

As steam has become one of the greatest mechanical moving powers by which the intercourse of social life is maintained and facilitated, it must be desirable to every friend to human happiness that it may be made as harmless as it is powerful. This, if ever done, can only be accomplished by the institution of inquiry through the agency of the General Government, and stimulating the inventive powers of our countrymen until they shall have overcome the power of the almost invisible agent from which they now derive such immense advantage over former ages.

In inquiring into the causes of the many accidents that have happened by the bursting of steam-boilers, and by which there has been so large an amount of life and property destroyed, it is unnecessary to go back farther than the last two years, to examine the causes of explosion that have taken place within that time. Full nine-tenths of these will show, so far as the facts could be ascertained, that the explosion has been mainly caused by a want of sufficient water in the boiler; at the same time keeping up an intense heat, causing an expansion of steam to many pounds above what the boiler was constructed to bear per square inch.

Taking this, then, as the fact, (and, I think, the experience of the last two years will fully sustain the position;) and laying aside the effect produced on different metals by the expansive power of steam, presuming all steam-boilers to be constructed of the best materials, and on the most approved plan, it will make but little difference whether the explosion took place while the boat was at rest, immediately on starting, or when under way. We have only to examine, first, the causes of this diminution of water in the boiler, with a well-constructed steam-engine; and, secondly, the best and most probable means of keeping the surface of the boiler, to which the necessary heat is applied to propel the machinery, well covered with water.

First, then, the causes that may operate to prevent a sufficient supply of water to the boiler are—1. Obstructions to the supply-pump for a length of time, while the engineer is deceived by his gauge-cocks, in consequence of the ebullition of water in the boiler. 2. The temporarily stopping the boat: the fires are kept up, the engine is quiet, and, consequently, no supply of water to the boiler by the supply-pump. It is evident that the contents of the boiler must soon become exhausted, exposing the metal of the boiler to an intense heat, which, with its diminished contents, is rendered too weak and unsafe for a new supply of water. The most experienced engineer may be deceived by the gauge-cocks; for as the water in a boiler approaches the minimum with a powerful heat, the water is raised from the heated surface, and partakes both of the nature of water and steam. At this time the gauge-cock may give evidence of a full supply of water; and, if tried the next moment, there would be nothing found but steam.

Another cause is the horrid custom that is said to have been practised by some officers of boats, of loading down the safety-valve, to retain the heated steam during their temporary stoppages, with the view to apply a greater force to the machinery when they start. With the engine, the forcing-pump is put in motion; and, when the boiler is the least prepared to receive it, a full supply of water is thrown on the heated surface of the metal, which, generating steam too rapidly for its then weakened state to bear, an explosion must ensue. And add to this the great desire that has been manifested lately for making quick trips from one place to another; the great emulation between the officers of rival boats to exceed one another in speed: the great probabilitythat the supply-pump is often stopped for the purpose of increasing the power of steam; and we have abundant causes for the small quantity of water found to have been in the boiler immediately preceding its explosion.

Secondly, then, I propose to recommend such measures as it is believed will have a tendency to prevent a diminution of water in the boiler, and to keep the engineers and officers, at *all* times, informed of the precise quantity of water in the boiler, in all different situations of the boat, and whether constructed of one or more boilers. The boiler can only be well supplied with water through the agency of the forcing-pump. To prevent its being obstructed; never to allow the supply-pump to cease, with the safety-valves closed at the same time; and to have the boiler and engine solely under the care of a competent engineer, who shall be liable to heavy penalties for a deficiency of water, occasioned by any neglect of his own must be left to legislation.

The means that have been used to keep the engineers and officers of

steamboats well informed of the precise quantity of water in the boiler, have been various; and those that have been well tested by practice have been of but little utility. Tubes of glass, placed in the heads of boilers, have been tried at Pittsburg, (Penn.) and other places. The machine called "the tell-tale," designed to give notice when the water gets too low; the alloy, or "fusible plug," and many others, have been tried; but experience has proven that they cannot be relied on as any thing like a guide to the engineer. But the apparent necessity of making the engine-tender an eye-witness to the quantity of water in the boiler has set the inventive genius of our countrymen to work; and there are now in progress several inventions which promise to be of much utility in effecting this desirable object. Among the number is one invention (and for which a patent has already been taken out) intending to designate the quantity of water in the boiler, and at the same time relieve the boiler from any pressure by steam. This invention is denominated "the double self-acting safety-valve;" which has been applied to stationary engines, and fully tested, to the satisfaction of numerous scientific and practical engineers in our country, who witnessed the experiments; and it is presumed to be equally as applicable to locomotives and steamboats.

The peculiar and valuable attribute of this invention is, that it does not require the constant and unremitting attention of the engineer. Its power is self-acting; it gives notice of the condition of the boiler, making known the approach of danger, and itself applies the remedy. It consists of two valves—one opening upwards, the other downwards—upon the top or upper side of the boiler, and connected with a weight inside the boiler. It is founded on the principle that a body immersed in water is lighter, or weighs less, than when suspended in any medium less dense than water, (as air, or steam;) and loses, by immersion in water, an amount in weight exactly equal to the weight of water that is displaced by it. When the water in the boiler is in due quantity for safety, the weight inside the boiler is entirely immersed in water; the two valves are then closed, because they balance each other, and the expansive force of steam within the boiler, while tending to open the upper valve, operates to close the inside or lower valve. The weight thus immersed in water weighs nothing; or, if it should weigh more than its bulk in water, it can be balanced by a weight attached to a lever outside the boiler. When the water in the boiler falls below the inside weight, or leaves any portion of it uncovered, the weight, falling, preponderates over the weight outside, opens both the valves, and enables the steam to escape. Therefore, in all cases, with this weight lying on the surface of the water, inside the boiler, and attached to the inside valve, the diminution of water in the boiler, from whatever cause, producing an inclination of the weight downward, will throw the valves open, and liberate the excess of steam.

Without going any farther into the principle which seems to have governed the inventor, I will only add the opinions of a few gentlemen, of great practical knowledge, who have had the opportunity of fully testing the usefulness of this invention.

Mr. Gratiot, the head of the Engineer department, says, "he willingly bears testimony to the sufficiency of the principle involved; and there can be no doubt that the introduction of those valves would lessen, in a great degree, the risk of explosion from ignorance or carelessness; and that it deserves the most favorable consideration of the National Legislature."

Mr. Nicholas Johnson, a gentleman who has been many years engaged in building engines at Philadelphia, says, "that he is fully convinced of the efficacy of this invention; and where it is properly adjusted to a boiler, he considers an explosion impossible."

Watchman & Bratt, well known steam-engine builders at Baltimore, state, that "in twenty years' experience we have had, we have never seen any thing so perfect in action, simple in construction, and, at the same time, such a perfect guard against explosion. In fact, in a boiler provided with this apparatus, we consider an explosion impossible; and do not hesitate to recommend it to all owners of steam-engines, whether stationary, locomotive, or steamboats, either high or low pressure."

This invention was the subject of investigation by a very able committee, during the last session of Congress, who, through their chairman, (Mr. Owens,) made a favorable report, stating that "the committee, confidently believing that it will in a great measure prevent the explosion of steam-boilers, do recommend an appropriation for the purpose of making a practical application of the invention." But, owing to the great mass of business before the House at the last session, the bill for this purpose did not come before them.

That the application of this invention is, then, the most likely method of preventing a diminution of water, and relieving the boiler from any undue proportion of steam, and thereby preventing explosion, seems, I think, placed beyond a doubt. It therefore becomes our National Legislature, by the enactment of such laws as to them may seem proper, to secure its application to all steam-boilers liable to explosion from this cause, until some more useful and perfect means be discovered to secure the personal safety of our citizens. Without it, "life has no enjoyment; and, unless it is afforded, Government but half does her duty."

That the present law of Congress has proved highly beneficial, in securing proper attention from engineers, officers, and owners of steamboats, to the safety of passengers and property conveyed in them, is true; and it reflects highly on the character of the individual who drew it up: but, in the minds of men who have paid it much attention, it seems to have left untouched some of the most essential points necessary to prevent explosion.

That the materials of which boilers are constructed demand the serious consideration of those who are seeking for safety in the use of steam, is well known; and it would not, perhaps, be considered presumption to suggest that we might, with credit, follow in the footsteps of legislation in England and in France on this point, and enact laws which would secure steam-engines being constructed of materials the best suited to the purpose; that every steam-boiler should, previous to its use for the conveyance of passengers, be submitted to the inspection of a skilful engineer, who should ascertain, by trial, the strength of such boiler, and certify his opinion of the security with which it might be employed to the extent proposed; that the inspector should certify as to the force of steam per square inch that the boiler is able to sustain; that this capacity of the boiler be marked in some conspicuous place on the engine, and open to the inspection of passengers; that every boiler be supplied with a mercurial gauge, designating the force of steam per inch under which the engine is working, and likewise placed in some conspicuous situation. And heavy penalties being *imposed* on the officers of boats for wilfully forcing the steam beyond the

power which the boiler was constructed to bear, would, perhaps, afford much additional security.

This restriction would do much towards relieving passengers on board of steamboats from that natural anxiety that is felt at the present day. By having the capacity of the boiler to bear pressure, and the force or pressure of steam applied, open to their own inspection, they would at all times be shown their situation, and, by their remonstrance, they would often prevent the approach of danger.

Each boiler should be supplied with two sufficient safety-valves, one of which should be inaccessible to the engineer or officers of the boat; that these valves should undergo inspection, by a competent person, once in every ten days, to prevent adhesion to the boiler by corrosion, who shall certify at what pressure the valves shall be open.

Though the above has been thrown together during the hurry and pressure of business, I trust its humbleness will not militate against the cause it advocates, but that a sufficient apology for all its defects will be found in a liberal interpretation of my motives.

I have the honor to be, sir, respectfully,

Your most obedient servant,

J. P. VAN TYNE.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

W 6.

BROOKLYN, L. I., *September* 16, 1838.

DEAR SIR: Your letter of the 3d ult., enclosing a circular of the Treasury Department requesting my views on the subject of steam-boiler explosions, and also on the law "passed on the 9th of July last," has been received; but my private avocations have deprived me of the pleasure of furnishing my replies at so early a date as I could wish. I regret the delay the less, knowing that you have my views on explosions already in hand, in my published letter to Mr. Grundy; and that my views in relation to the *law* must necessarily be very crude and useless to you, as the study of my whole life has been *mechanics* and not *law*.

The law, as appears by your circular, in section 6 provides for the employment of "experienced and skilful engineers;" but I know of no qualified tribunal to decide and certify as to what measure of experience and skill shall constitute *legal* experience and skill, that employers may know when they are acting within the meaning of the law. Every owner must decide on this point for himself; and if one be possessed of small intellectual capacity, he may be carried away with the idea of great "experience and skill" in seeing a person exert great physical energy, and apparent (to him) decision of character, though this same person would not be trusted as fireman by a clear-minded owner. I do not see any *definite* meaning in this part of the 6th section.

In the same section follows, "in case of neglect to do so, the said owners and masters shall be held responsible," &c. This seems to me to be a mere repetition of what was always law and equity. I think we had laws enough to fully protect our citizens, if they had been carried into effect,

without any new law upon the subject. I cannot see that the multiplication of laws to meet every little incident which may happen is likely to be of any public benefit. Laws, to be of much public utility, must be based upon, and administered with, equal justice to all; to be generally known, they must be permanent; and to be respected, must be sure of enforcement.

The great fault of the law-makers of our country, from highest to lowest, is, too great a multiplication of laws and too little enforcement. They see a certain crime or species of injustice go unpunished, and straightway a law is passed against such crime or injustice, regardless of the laws already in existence against them; whereas the cause why justice did not follow by the old law should have been the subject of action.

In our peculiar form of government, where almost all offices are elective, even to the constable, no officer is willing to risk his own popularity by the enforcemeut of an unpopular law; he is dependent upon the citizens of his particular district for re-election, and if he becomes obnoxious to his constituents, particularly that class of voters who move more by impulse and prejudice than by reason and justice, his office slips away from him, and he is left destitute of the means of support for himself, and perhaps a numerous family. Thereby it is that our laws are so little enforced; that hundreds of our most valuable citizens are deprived of life against all law, because it would be against the *interests of trade* for an inquest to examine too closely into the causes of such fatal consequences, or to institute legal proceedings to bring the perpetrators to justice; the officer depending more for his continuance in office upon the votes of those who are dependent themselves for daily support upon the employment of persons engaged in trade, than upon a faithful discharge of their official duties.

In other countries you are aware that all judicial and executive offices are filled by the government; and consequently any act affecting the life or property of the subject is immediately inquired into, particularly in relation to *accidents* by travelling; the offenders are immediately deprived of their liberty, and put in jeopardy of life, if life has been destroyed by their apparent carelessness. Not so in our country: here we are mostly ruled by corporations and-joint stock companies, "who have neither bodies to be kicked, nor souls to be damned;" who govern the voters in their employment, who govern a large proportion of the officers whose duty it is to see to these things.

If half the citizens of this country should get blown up, and it should be likely to affect injuriously the trade and commerce of the other half by bringing to justice the guilty, no elective officer would risk his popularity by executing the law, without some alternative which should weigh stronger upon his mind than the loss of office; and perhaps an appointed officer would find it rather dangerous business to execute an unpopular law during an excitement, unaided by numbers, which he seldom has at command.

I would by no means deprive the citizen of his right of suffrage, but the officer elected should be subjected to very severe penalties for neglect of duty. There should be some way provided (if there be not already) to hold an officer to the performance of his duties; and until this be done, crimes will be committed, and *accidents* happen, and Lynch-law stalk

abroad in the land with impunity, and the innocent must suffer for the crimes of the guilty.

An inquest should be taken at the time of an accident, (as the witnesses to the facts are then present,) and their evidence taken in writing, for the purpose of having the subject prosecuted before some court when in session. These witnesses could never be brought together again, neither could they be detained, merely to aid the cause of justice, against their own interests. If they could be examined at the time, and then permitted to go about their business, they would give in their evidence voluntarily and cheerfully, and public justice would be righteously administered. Restitution should be enforced to the full extent of the *whole* property of all owners and officers, or to the full extent of the damage sustained, wherever it can be shown, in a pecuniary shape. Owners and engineers of any boat that shall have suffered any severe accident through carelessness, should be forever disqualified from owning or serving in a passage-boat again; and, also, to be considered wilfully endangering human life, though no accident happen, for any person or company to employ such disqualified persons on board of, or to allow them any ownership in, any passage-boat.

Section 7, providing for the discharge of steam when not using it through the engine, presupposes that explosion is produced by an over-accumulation of steam; whereas, I have shown in my letter to Mr. Grundy that explosion in such cases does not take place till the pressure of steam is considerably reduced. If the situation of the water in the boiler be such as to be in imminent danger from explosion, the *regular* discharge of steam may certainly delay the fatal moment of explosion for some minutes, and perhaps for half an hour; but the fatal moment is sure to come, unless the boiler be replenished with water before the *foaming* of the water inside be allowed to subside, or the fire be put out, to let such part cool down that has become red-hot. All explosions, in my opinion, *are produced* by the parts of the boiler which should be covered with water becoming red-hot, as stated in the letter above referred to.

Mr. Bache, professor, &c. in the University of Pennsylvania,* invented an *alarm*, which, if applied to boilers, would be perfectly efficient in detecting or making known when the material contained in them is verging towards a dangerous state; and if, after this alarm has done its duty, the fire be promptly removed, and the boiler refilled with water, it would be impossible for a dangerous explosion of a boiler ever to take place. I have myself a plan of an alarm, or tell-tale, which to me appears far superior, for economy, convenience of application, and unliability to be tampered with, to the one above spoken of, which I expect to publish at the proper time.

The whole of section 9 I consider of very great importance, and think it should be rigidly enforced upon all boats which have occasion to go more than one mile from shore.

Section 13 is also very important, and I have no doubt will be found very useful in practice; but I think it needs some little amendment. Serious accidents have occurred from carelessness or ignorance in letting the water get too low, heating the boiler red-hot, and setting the boat on fire, without producing explosion: such was the case with the Washington last

* See Journal Frank. Inst., Oct. 1832.

spring, on lake Erie, (though some accounts say explosion took place after the fire had obtained command of the boat,) and also with the Royal Tar, on the Mississippi, some two years since. I would insert after the words "or other injurious escape of steam," the words "or the destruction or partial destruction of the boat by fire," in two places.

Yours, very respectfully,

WM. H. HALE.

The Hon. LEVI WOODBURY,
Secretary of the Treasury U. S.

W 7.

NEWARK, N. J., *October* 1, 1838.

SIR: Having seen a law passed by the Senate and House of Representatives, and sanctioned by you, respecting the explosion of steam-boilers, and for the purpose of testing inventions to remedy the same, I make bold to assert that it is out of the power of man to make any such discovery except in long practice and experience. The fault is not in the boilers, but in the men *calling* themselves engineers, who are incapable of taking charge of an engine for these reasons:

1. Because they know nothing about the nature of steam.
2. Because they know not how to remedy a defect, if there is one.

There is not one to every ten that call themselves engineers that is a practical and theoretical mechanic. The reason of this is, because an experienced man will not work for the same wages that an inexperienced man will. Your committee may expend millions of dollars in testing inventions of this kind, and when they leave off, they will have accomplished no more than the celebrated John Clark did when he attempted to burn gunpowder in a cylinder without having it explode. Engineers are the *inventions* that your committee should test; and if found capable of taking charge of an engine, and holding the lives of thousands of souls in their hands, *let such* receive a diploma from Government; and pass a law that such only shall be employed as engineers who hold such a diploma. Such a course would undoubtedly be a great saving of human life, and prevent much imposition. The engineer who does his duty performs a hazardous service, and ought to be remunerated accordingly.

Very respectfully, yours,

WM. B. DODD,
Practical and Theoretical Engineer.

Hon. MARTIN VAN BUREN,
President U. S.

P. S. The above has been written by me at the request of a number of citizens who have been on board of unlucky steamboats. Hoping that your honor will condescend enough to give it that attention which the subject needs, and favor it with publicity,

I remain, yours respectfully,

WM. B. DODD.

List of material "accidents and loss of life and property, by explosions and other disasters," which have occurred to steamboats in the United States; with a supplement containing a few which have occurred to locomotive and stationary engines.

Names of boats.	Date.	Cause.	Injury to life.		Property lost.	Place where accident occurred.
			Killed.	Wounded.		
Amazon	–	Particulars unknown.				
Advocate	1836	Explosion of boilers	–	–	Unknown	Hudson river.
Alabama	1825	Do.	4	–	Do.	Mississippi river.
Arkansas	1825	Do.	4	–	Do.	Red river.
Atalanta	1816	Do.	2	–	Do.	New York harbor.
Atlas	1828	Do.	1	–	Do.	Mississippi river.
Andrew Jackson	1831	Do.	2	–	Do.	Savannah river.
Assinaboin	1825	Burnt	–	–	Do.	Missouri river.
Augusta	1838	Explosion of boilers	20	12	Do.	Mississippi river.
American	1836	Sunk—snagged	–	–	Do.	Illinois.
Ashley	1838	Do.	–	–	Do.	Mississippi river.
Boonslick	1835	Collapsed flues	4	9	Do.	Do.
Bonnets of Blue	–	Sunk; all particulars unkn'n.				
Ben Sherrod	1837	Fire	About 130 lost	–	–	Do.
Belfast	–	Do.; all particulars unkn'n.				
Black Hawk	–	Explosion of boilers	Number unknown		Do.	Do.
Brown, General	1838	Do.	31	11	Do.	Do.
Black Hawk	1838	Snagged	–	–	Vessel and cargo lost	Do.
Banner	1834	Explosion	5	13	Unknown	Do.
Barnet	1828	Do.	1	–	Do.	Long Island sound.
Bellona	1819	Do.	2	–	Do.	New York harbor.
Bristol	1824	Do.	–	1	Do.	Delaware river.
Beaver	Unknown	Do.	–	–	Do.	Ohio river.
Boonville	1837	Snagged	–	–	Do.	Missouri river.

X—Continued.

Names of boats.	Date.	Cause.	Injury to life.		Property lost.	Place where accident occurred.
			Killed.	Wounded.		
Beaver - -	1832	Snagged - -	–	–	Unknown - -	Missouri river.
B. J. Gilman - -	1838	Collision of boats - -	–	–	Do. - -	Ohio river.
Belle of Missouri - -	1838	Snagged - -	–	–	Do. - -	Mississippi river.
Ben Franklin - -	1836	Explosion of boilers -	11	14	Boat destroyed - -	Mobile.
Constitution - -	1817	Do. - -	13	–	Unknown - -	Mississippi river.
Caspian - -	1833	Burnt - -	40	–	- - - -	Near mouth of Red river.
Caroline - -	1837	Explosion of boilers -	3	–	Do. - -	Lake Pontchartrain.
Chippewa - -	1833	Snagged and sunk - -	–	–	Full cargo of cotton -	Red river.
Caledonia - -	1830	Do. - -	11	11	Unknown - -	Mississippi river.
Camanche - -	1838	Snagged and sunk; no further particulars.	–	–	- - -	Do.
Car of Commerce* - -	1830	Explosion - -	28	29	Unknown - -	Ohio river, or Missouri river.
Constitution - -	1825	Do. - -	3	–	Do. - -	Hudson river.
Caroline - -	1837	Fire, (wilful) - -	5	–	- - - -	Niagara falls.
Chicago - -	1825	Went ashore in a gale -	–	–	None - -	Mouth of St. Joseph's river.
Carolina - -	1830	Explosion of boilers -	1	–	Unknown - -	New York harbor.
Chief Justice Marshall -	1830	Do. - -	11	2	Do. - -	Hudson river.
Cotton Plant - -	–	Do. - -	Unknown -	Unknown -	Do. - -	Mobile, Alabama.
Chester - -	1835	Snagged - -	–	–	Do. - -	Mississippi river.
Chilicothe - -	1838	Do. - -	–	–	- - - -	Do.
Ceylon - -	1837	Burnt - -	–	–	Vessel and cargo lost -	Ohio river.
Compromise - -	1837	Snagged - -	–	–	Boat lost; cargo damaged	Mississippi river.
Chariton - -	1837	Explosion of boilers -	3	5	Unknown - -	St. Louis.
Czar - -	1838	Snagged - -	–	–	- - - -	Mississippi river.
Champlain - -	–	- - - -	–	–	- - - -	Do.
Commerce - -	1836	Explosion of boilers -	3	–	- - - -	Ohio river.

* The Car of Commerce is represented by some writers to have been lost by an explosion, (see Report, May, 1832, House of Representatives, App.) Such [illegible] the fact, though others state the loss to have been by a snag.

Cleopatra	-	-	Particulars unknown.				
David Crockett	-	1834	Went ashore in a gale	-	-	None - -	St. Joseph's river.
Delaware	-	1837	Explosion of boilers	1	-	Do. - -	Delaware river.
Delaware	-	1838	Went ashore in a gale	-	-	Total loss - -	Near Cape Florida.
Delaware	-	1834	Do. -	-	-	Do. - -	Nine miles above Chicago.
Dolphin	-	1836	Explosion of boilers	15	10	Unknown - -	Coast of Florida.
Don Quixote	-	1836	Went ashore in a gale	-	-	$1,500 worth property lost	Lake Huron.
Diana	-	1836	Snagged -	-	-	Unknown - -	Missouri river.
Detroit	-	1834	Went ashore in a gale	-	-	None - -	Lake Michigan.
Dubuque	-	1837	Explosion of boilers	-	14	Unknown - -	Mississippi river.
Dart	-	1838	Struck a rock and sunk	-	-	Boat a total loss -	Do.
Dodge, General	-	1838	Snagged -	-	-	Unknown - -	Do.
Experiment	-	1829	Explosion of boilers	2	-	Do. - -	Gunpowder river.
Etna	-	1824	Do. -	13	-	Do. - -	New York bay.
Enterprise	-	1825	Do. -	9	4	Do. - -	Charleston, S. C.
Eagle	-	1824	Do. -	2	Several -	Do. - -	Chesapeake.
Eutaw	-	-	Particulars unknown.	-	-	Do. - -	Ohio river.
Enterprise	-	1834	Snagged -	-	-	Do. - -	Mississippi river.
Emerald	-	1837	Do. -	-	-	Do. - -	Do.
Free Trade	-	1836	Explosion of boilers	5	-	Do. - -	Savannah river.
Fair Star	-	1830	Do. -	2	-	Do. - -	Alabama.
Feliciana	-	1825	Do. -	2	-	Do. - -	Mississippi.
Fidelity	-	1825	Do. -	2	-	Do. - -	New York harbor.
Floridian	-	1838	Snagged -	-	-	Sunk - -	Chattahoochie river, Ga.
Franklin	-	1826	Explosion of boilers	1	-	Unknown - -	Hudson river.
Friendship	-	1838	Snagged -	-	-	Do. - -	Illinois.
Fancy	-	Unknown	Burnt.				
Freedom	-	-	Particulars unknown.				
Fulton, U. S. steam-ship	-	1829	Explosion of magazine	33	27	Do. - -	New York harbor.
Fame	-	-	Particulars unknown.				
Flora	-	1836	Explosion of boilers	1	13	Do. - -	Ohio river.
Falcon	-	-	Particulars unknown.				
Fulton	-	1838	Explosion of boilers	-	-	Do. - -	Mississippi river.
General Robinson	-	1817	Do. -	9	-	Do. - -	Do.
Grampus	-	1828	Do. -	Unknown -	-	Do. - -	Do.
General Jackson	-	1831	Do. -	12	13	Do. - -	Hudson river.
Globe	-	1834	Snagged -	-	-	Do. - -	Missouri.
Governor Dodge	-	1838	Do. -	-	-	Do. - -	Mississippi.
Gibbons, William	-	1836	Wrecked -	6	-	Vessel lost - -	Coast of Carolina.

X—Continued.

Name of boats.	Date.	Cause.	Injury to life.		Property lost.	Place where accident occurred.
			Killed.	Wounded.		
Home	1837	Foundered in gale of wind	100	–	Vessel lost	Coast of Carolina.
Heriot	1817	Explosion of boilers	1	–	Unknown	Mississippi river.
Helen Macgregor	1830	Do.	33	14	Do.	Do.
Huntress	1830	Do.	4	–	Do.	Do.
Hudson	1826	Do.	–	1	Do.	East river, N. Y.
Hornet	1827	Do.	2	2	Do.	Alabama.
Herald	–	Particulars unknown.				
John Hancock	1836	Snagged	–	–	Do.	Missouri.
Illinois	1836	Do.	–	–	Do.	Mississippi river.
Illinoian	1836	Do.	–	–	Do.	Do.
Junius	1836	Burnt	–	–	Do.	Do.
Irene	1838	Snagged	–	–	Do.	Do.
Iowa	–	Particulars unknown	–	–	Do.	Lake Pontchartrain.
Jersey	1824	Explosion of boilers	2	–	Do.	Jersey City.
Jubilee	–	Particulars unknown.				
John Hancock	1817	Explosion of boilers	–	1	Do.	Long Island sound.
Ion	1837	Fire	9	–	1,100 bales of cotton	Mississippi river.
Joe Daviess	–	Particulars unknown.				
John McLean	1838	Went ashore	–	–	Vessel & cargo totally lost	Near New Smyrna, Florida.
Kenawha	1830	Explosion of boilers	8	4	Unknown	Ohio river.
Kansas	1836	Do.	–	–	Do.	Missouri river.
Lady Franklin	1835	Collision	18	drowned	Do.	Ohio river.
Liberty	–	Snagged	–	–	Do.	Missouri river.
Louisville	1834	Do.	–	–	Do.	Do.
Lafourche	–	Particulars unknown.				
Lexington	–	Do.				
Legislator	1825	Explosion of boilers	5	2	Do.	New York harbor.
Logansport	1838	Snagged	–	–	Total loss	Mississippi.
Monroe	1837	Foundered, ran upon a rock; other particulars not ascer-	–	–	–	Lake Erie, 500 tons.

Marion	1835	Collision	–	–		Do.		Mississippi river.
Monmouth	1837	Do.—sunk	300	–		Do.		Do.
Mage	1826	Explosion of boilers	4	–		Do.		South Carolina.
Missouri	1829	Snagged	–	–		Do.		Missouri river.
Missouri Belle	1834	Collision of boats	–	–		Do.		Mississippi river.
Majestic	1837	Explosion of boilers	3 scalded		4	Do.		Do.
Missouri Fulton	1838	Struck on a rock and sunk	–	–		Boat worth $50,000		Do.
Motto	1838	Explosion of boilers	5		4	Total loss		Near mouth of Sabine river
Miner	–	Particulars unknown.						
Moselle	1838	Explosion of boilers	120		16	Boat destroyed		Ohio river.
Maid of Orleans	1819	Do.	6	–		Do.		Savannah river.
Mail boat	1837	Do.	3		6	– –		Louisville, Ky.
Neosho	1837	Snagged	1	–		Boat and cargo lost		Mississippi river.
New York	About 1825	Fire	–	–		Boat & property destroyed		Coast of Maine.
New England	1838	Collision	1	–		$40,000		Do.
New England	1833	Explosion of boilers	15		10	$17,500		Connecticut river.
Napoleon	–	Particulars unknown.						
Norfolk	1838	Snagged	5	–		Loss of boat		Mississippi river.
Navigator	–	Particulars unknown.						
Newburyport	1831	Went ashore in a gale	–	–		– –		Lake Michigan.
Native	1838	Collapsed flue	2	–		– –		Eddyville, Tennessee.
Nicholas Biddle	1836	Explosion of boilers	17		16	– –		Near Memphis, Mississippi r.
Onsatonic	1833	Burnt	–	–		– –		Leonardtown, Md.
Oliver Ellsworth	1827	Explosion of boilers	3		7	$8,000		Mouth of Connecticut river.
Ohio	1832	Do. of chimney or flue	5	Several		Unknown		Hudson river.
Oronoko	1838	Collapse of flue	130	–		Do.		Mississippi river.
Oglethorpe	1835	Explosion of boilers	9	–		$24,000		Savannah river.
Oliver Ellsworth	1827	Do.	3	–		Unknown		Long Island sound.
O'Connell	1836	Snagged and sunk	–	–		Do.		Mississippi river.
Oceana	1837	Do.	–	–		Do.		Do.
Otto	–	Particulars unknown.						
Ottoway	–	Do.						
Ohioan	–	Snagged and sunk.						
Ploughboy	1837	Explosion of boilers	3	–		Boat lost		Do.
Phenix	1819	Fire	7		7	Boat destroyed		Lake Champlain.
Pulaski	1838	Explosion of boilers	138	–		Boat and cargo sunk		Coast of Carolina.
Protector	1834	Consumed by fire	Escaped	–		Boat and 200 bales cotton		Below Claiborne, Alabama.
Porpoise	1830	Explosion of boilers	Unknown	Unknown		– –		Mississippi river.
Paragon	1825	Do.	1		1	– –		Hudson river.

X Continued.

Names of boats.	Date.	Cause.	Injury to life.		Property lost.	Place where accident occurred.
			Killed.	Wounded.		
Patent	1820	Explosion of boilers	5	2	-	New York harbor.
Powhatan	1824	Do.	2	–	-	Norfolk.
Patriot	1828	Do.	2	–	$8,000	Ohio river.
Phœnix	1836	Burnt	–	–	-	Mississippi river.
Peoria	1834	Snagged	–	–	-	Illinois.
Potosi	1836	Snagged and sunk	–	–	-	Mississippi river.
Platt	1838	Do.	–	–	-	Mississippi river,
Polander	–	Particulars unknown.				
Planter	–	Particulars unknown.				
Paul Jones	1837	Fire	–	–	Damage $4,000	Betw. Wash'n and Alex'a.
Pioneer	1825	Foundered in a gale	–	–	None	Lake Michigan.
Perry, Commodore	1835	Explosion of boilers	6	–	-	Detroit, Michigan.
Privateer	1837	Snagged and sunk	–	–	-	Red river.
Peruvian	1833	Do.	–	–	Full cargo cotton, &c.	Natchez island.
Pioneer	1836	Explosion of boiler	10	7	$35,000	Alatamaha river.
Pioneer	1837	Burnt	–	–	Unknown	Alatamaha river.
Quincy	1838	Snagged	–	–	-	Mississippi river.
Royal Tar*	1835	Fire	40	–	Boat & prop'ty destroyed	Coast of Maine.
Randolph	1836	Fire	1	–	Supp'sd to exc'd $200,000	Cumberland river.
Rob Roy	1836	Collapse of flue	3	25	-	Mississippi river.
Raritan	1818	Explosion of boilers	1	–	-	Raritan river.
Rampo	Jan., 1826	Do.	5	2	-	New Orleans.
Rampo	Mar., 1826	Do.	1	1	-	New Orleans.
[illegible]	1838	Snagged	1	–	-	Mississippi river.
[illegible]	1838	Do.	–	–	Boat and cargo lost	Do near Alton.
Return	–	Particulars unknown.				
Renown	1838	Sunk	–	–	Boat lost	Mississippi river.

* This vessel (the Royal Tar) is inserted in the returns, as the accident occurred within our waters; but the boat is believed to have been owned abroad.

Oakland - / 1838

Scotland	1833	Collapsed flue	1	4	Unknown	Mississippi river.
Sun	1831	Fire	–	–	Do.	Off Sandy Hook.
Sampson	1836	Fire	–	–	Do.	Mississippi river.
Star of the West	1834	Explosion	2	Several	Do.	Betw. Mobile & N. Orleans.
Swan	1837	Snagged	–	–	Unknown	Mississippi river.
Swan	1838	Foundered in a storm	–	–	300 hogsheads sugar	Lake Chicot.
Susquehanna	1826	Explosion of boilers	2	–	–	Susquehanna river.
Saint Louis	1834	Snagged	14	–	–	Mississippi river.
Saint Louis	1838	Struck a bar, & broke steam-pipe.	3	–	Little damage	Mississippi river.
Saint Charles	1836	Burnt	–	–	–	Missouri river.
Shelby, Governor	1838	Explosion of pipes	–	10	–	Mississippi river.
Steam ferry-boats, (2)	1837	Explosion of boilers	8	6	–	Louisville, Ken.
Tangipaho	1838	Fire	3	–	Unknown	Mississippi river.
Tesch	1825	Explosion of boilers	Several	Several	–	Mississippi river.
Tallyho	1830	Do.	–	–	–	Cumberland river.
Tri-color	1831	Do.	8	8	–	Ohio river.
Trenton	1830	Snagged	–	–	–	Mississippi river.
Talisman	1834	Burnt	–	–	–	St. Louis.
Tiskilwa	1837	Collision of boats	12 drowned	–	–	Illinois.
Tow-boat	1837	Broke steam-pipe	1	–	–	From Balize to N. Orleans.
Thorn	1834	Explosion of boiler	3	–	–	Blakely, Alabama.
Tempest	1838	Snagged	–	–	Total loss	Chattahoochie river, Ga.
Union	1837	Explosion of boilers	3	3	Unknown	Potomac river.
United States	1830	Do.	9	–	–	Long Island sound.
Union	1827	Do.	4	7	–	Ohio river.
Vicksburg	1837	Fire	–	–	$100,000	Mississippi river.
Vigo	–	Particulars unknown.				
Washington, George	1833	Went ashore in a gale	1	–	$60,000; (no insurance)	Canada side of lake Erie.
Washington	1831	Collision of boats	30	–	–	Long Island sound.
Walk-in-the-Water	1835	Fire	1	–	13 bales cotton	At Natchez.
Washington	1816	Explosion of boilers	7	9	–	Ohio river.
W. Peacock	1830	Do.	15	–	–	Buffalo.
Warrior	1837	Snagged	–	–	–	Mississippi river.
Wave	1837	Burnt, (destroyed)	1	–	–	Illinois.
Wilmington	1838	Driven ashore in a gale	–	–	Boat & cargo chiefly lost	Near Cape Florida.
Walter Scott						
Water Witch						
Whig Victory						

X—Continued.

Names of boats.	Date.	Cause.	Injury to life.		Property lost.	Place where accident occurred.
			Killed.	Wounded.		
William F. P. Taylor -	1835	Went ashore in a gale -	-	-	- - - -	Near Michigan city, Ind.
William Penn - -	1834	Burnt - - -	5	Several -	Several mails burnt; boat, worth $70,000, lost; & $20,000 in freight.	Delaware river.
Washington - -	1838	Burnt - - -	50	Unknown -	Boat and cargo destroyed.	Off Silver creek, lake Erie.
Washington - -	1838	Snagged - - -	-	-	- - - -	Miss. river, near Ft. Adams.
Yazoo - - -	1838	Explosion of boiler -	1	-	Unknown - -	Mississippi river.
Yankee - - -	1817	Do. - -	4	-	- - - -	Mississippi river.
Aggregate ascertained -	-	Whole No. of accidents, 228	1,676	443		

REMARKS.

1. Of the above accidents, ninety-nine appear to have been by explosions and collapses; twenty-eight by fire; twenty-five by shipwreck, from gales, collisions, &c.; fifty-two from snags and sawyers; and twenty-four from different and unknown causes.

2. The number of lives lost, and of the wounded, by many of these accidents in boats, is differently stated in different accounts. In several cases, it will be seen that the number is not stated in any account to which the Department has had access: accordingly, estimates have been made in the general result to cover such cases, as well as others, where no particulars whatever of the accidents could be procured without further time and more extensive correspondence.

3. The accounts of the causes of the accidents are sometimes contradictory: in such cases, the Department has relied on the best information now in its possession, but which is occasionally imperfect.

Supplemental list containing particulars, in a few cases, of "accidents and loss of life and property by explosions and other disasters," which have occurred to locomotive and stationary engines in the United States.

Names of railroads on which accidents have occurred to locomotives.	Date.	Cause.	Injury to life.		Property lost.	Place where the accident occurred.
			Killed.	Wounded.		
Baltimore & Ohio railroad	1836	Upset; defect in the road	–	Several severely injured	Unknown	Near Monocacy river.
Do. do.	1834	Explosion; water too low in boiler.	1	1	Do.	First trial on the road.
Baltimore & Philadelphia R. R.	1838	Collision of cars	2	3	Cars destroyed	9 miles from Baltimore.
Baltimore & Washington R. R.	1836	Do.	1			
Do. do.	1837	Thrown from the track	None	1	–	3 miles from Baltimore.
Baltim'e & Susquehanna R. R.	1838	Defect in the road	3			
Boston & Worcester railroad	1837	Thrown from the track	None	1	–	Near Boston.
Boston & Lowell railroad	1837	Collision of cars	None	Several	Two cars injured	3 miles from Boston.
Camden & Amboy railroad	1836	Thrown from the track	2	Do.	One or two cars destroyed.	
Do. do.	1833	Wheel broke; ran off the road	3	23, 12 of whom badly.		
Columbia & Philadelphia R. R.	1836	Defect in road, or wheel broke	1	4	Two cars injured	Near Columbia.
Do. do.	1834	Iron connecting cars broke	None	Several	Car destroyed	On inclined plane.
Do. do.	1838	Defect in track; run off road	1	1	–	Near Mount Joy.
Fredericksburg (Va) railroad	1838	Obstruction in the road	2	Several.		
Harlaem (New York) railroad	1834	Explosion of boiler	1	1	–	Near New York city.
Lexington & Ohio railroad	1836	Thrown off the track	3	12	Do.	Near Frankfort.
Lexington railroad, Kentucky	1835	Do.	1	5	None	First trial on the road.
Portsmouth & Roanoke railroad	1837	Defect in the road	2	16	Three cars destroyed	44 miles from Portsmouth.
Pontchartrain railroad	1834	Neglect of engineer	–	–	Cars thrown from the road	Near New Orleans.
Petersburg & Blakely railroad	1838	Run from the track	None	2	–	7 miles from Petersburg.
Portage railroad	1834	Collision, & cars getting loose	2	–	Cars destroyed	Plane No. 1.
Providence & Boston railroad	1837	Collision	–	20, of whom 10 severely	Damages over $10,000 recovered by passengers.	Near Dedham.
Salem & Boston railroad	1838	Unknown	1			
Stonington & Providence R. R.	1838	Running against a bridge	1			

X—Continued.

Standing engines to which accidents have occurred,	Date.	Cause.	Injury to life.		Property lost.	Place where the accident occurred.
			Killed.	Wounded.		
Eagle cotton factory - -	1834	Explosion - -	5	3 - -	Building and machinery destroyed.	Pittsburg, Pennsylvania.
McQueen's furnace - -	1830	Explosion; water too low in boiler.	2	-	Building shattered to pieces	New York city.
Saw mill - - -	1837	Fire - - -	-	-	Estimated loss $30,000 -	Savannah river.
Do. - - -	1837	Explosion - -	3	5 - -	- -	Louisville, Kentucky.

Aggregate of material accidents ascertained in locomotives - - -	24	Killed - - -	27	Wounded - - -	90
Do. do. standing engines - - -	4	Killed - - -	10	Wounded - - -	8
	28		37		98

NOTE.—Several injuries are known to have happened on some of these and other railroads (in the locomotives) which caused loss of life, but the particulars of which I have not had time to ascertain with accuracy. On the Charleston and Hamburg railroad it is believed that two or three such have occurred.

ADDENDA.

The following returns, received after the foregoing had been sent to the House of Representatives, and after the report of the Secretary was printed, are added, under the resolution of the House:

A 1, 2, 3, and 4, additional returns from New Hampshire.

B 1 and 2, returns from Nashville, Tennessee.

C, additional return from Louisiana.

A 1.

COLLECTOR'S OFFICE,

District of Portsmouth, December 22, 1838.

SIR: Immediately upon the receipt of your instructions to open a correspondence for the purpose of obtaining information in relation to steam-engines in this district, I prepared and sent a circular to nearly every town in New Hampshire, addressed either to postmasters or town clerks, and have received answers from a large portion of them; but, from the imperfect manner in which the interrogatories have been answered by the persons addressed, residing in the towns wherein engines are located, I am enabled to make only the additional returns which are herewith transmitted.

The remaining towns not heard from are probably without any steam-engines in use.

I have the honor to be, very respectfully, your obedient servant,

DAN. P. DROWN, *Collector.*

Hon. LEVI WOODBURY,

Secretary of the Treasury, Washington.

A 2.

Additional return of all the steam-engines in use in the district of Portsmouth, exclusive of those used in steamboats and on railroads; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Place.	Name of mill or manufactory.	Names of owners.	Power of engine, in horses.	For what purpose used.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Fitzwilliam	–	–	10	In mills for sawing boards, shingles, staves, &c.	High	1836	Collum & Simonds -	–	No accident.
Keene -	–	–	One 5 & One 1	One for propelling engine for sawing lathes and other machinery; the other for turning metals for gunsmith.	High	1 in 1835 & 1 in 1836.	1 by John Gore, Brattleborough, Vt., and 1 by G. Woodward, Keene, N. H.	One 2 years & one 2½ years.	No accident.
Nashua -	–	Reed & Page -	10	For propelling blast furnace -	High	1833	Hinckley, of Boston -	–	No accident.
Swanzey -	–	–	3	Sawing and turning - -	–	1834	Mr. Gore	4 years -	No accident.
Walpole -	–	–	One 8 & two 4	1 for saw-mill, 1 tannery, and 1 in a grist-mill.	Low	–	John Gore, Brattleborough, Vt.	One 3 years, 2 about 1 yr. each	No accident.

CUSTOM-HOUSE, *Collector's Office,*
District of Portsmouth, December 22, 1838.

DAN. P. DROWN, *Collector.*

Return of steam-engines used on railroads in the district of Portsmouth; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of railroad.	No. of locomotives.	Power of engine, in horses.	High or low pressure.	When constructed.	By whom constructed.	How long in use.	Remarks.
Nashua & Lowell railroad -	3	30 each	High	1838	Two by H. R. Dunham & Co., New York city; and one by Proprietors of Locks & Canals, at Lowell, Mass.	Since 8th of October last, about 3 weeks each.	No explosions or other disasters.

CUSTOM-HOUSE, *Collector's Office,*
District of Portsmouth, December 22, 1838.

DAN. P. DROWN, *Collector.*

A 4.

Additional return respecting steam-engines used in steamboats in the district of Portsmouth; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Name of boat.	Where employed.	Tonnage.	Length from stem to stern.	Breadth at the broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engineers.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
Belknap -	On lake Winnipissiogee -	-	-	-	-	Meredith -	1834	-	-	-	-	40	High	Cyrus Alger & Co., South Boston.	1833	4 years.

REMARKS.—Some trifling damage has been sustained in blowing off the head of the engine, but no loss to person or property.

CUSTOM-HOUSE, *Collector's Office,*
District of Portsmouth, December 22, 1838.

DAN. P. DROWN, *Collector.*

B 1.

SURVEYOR'S OFFICE,
Nashville, December 10, 1838.

SIR: Enclosed herewith is a very imperfect return of the steamboats employed in my district, required by a resolution of Congress of June 29, 1838, together with such remark as I am able to make on the subject.

As I remarked to you in a former letter, owing to the low stage of the water in our river, our steamboats have been unable to reach this port, with the exception of one or two small ones, since early in the last summer; in consequence of which, those who were qualified to give the infomation desired by the resolution could not be seen. I therefore hope that these circumstances will serve as an apology for my seeming inattention to the provisions of the resolution.

There are several engines employed in manufactories and other works within the bounds of my district; but they are so remote from this place, and situated so remote from each other, as to render it almost impossible to collect the information desired. I have not been advised, however, of any accident or disaster happening to any one of these establishments.

I am, very respectfully, your obedient servant,

J. M. SMITH,
Surveyor, &c.

Hon. LEVI WOODBURY,
Secretary of the Treasury, Washington City.

B 2.

Return respecting steam-engines used in the district of Nashville; prepared in pursuance of instructions from the Secretary of the Treasury, to enable him to comply with a resolution of the House of Representatives of June 29, 1838.

Number.	Name of boat.	Where employed.	Tons and 95ths.	Length from stem to stern.	Breadth at broadest part.	Depth from spar-deck to keel.	Where built.	When built.	By whom built.	Names of owners.	Names of masters or commanders.	Names of engin'rs.	Power of engine, in horses.	High or low pressure.	By whom engine constructed.	When engine constructed.	How long in use.
				ft.in.	*ft.in.*	*ft.in.*											
1	Ellen Kirkman	Nashville	602 13	184 4	32 3	10 9	New Albany, Indiana.	1837	M. Robinson.	Johnson, Rayburn, & Co.	S. M. Barner	–	–	High	–	1837	1 year.
2	John Randolph	Nashville	549 85	193 0	30 6	10 6	New Albany, Indiana.	1837	M. Robinson.	J. and R. Yeatman & Co.	Joseph Miller	J. Dally	–	High	–	1837	1 year.
3	Rocky Mountain.	Nashville	297 55	161 5	23 7	8 1	Smithland, Ken.	1836	G. Garrison.	Gibson, Golladay, & Co.	Thos. Gilbert	W. Denny.	–	High	–	1836	2 y'rs.
4	Daniel Webster.	Nashville	345 42	170 0	26 0	8 8	Jeffersonville, Indiana.	1835	–	Connor, McAlister, & Co.	William Phillips.	—— McCann.	–	High	–	1835	3 y'rs.
5	Jim Brown	Nashville	233 63	163 5	23 0	6 7	Smithland, Ken.	1837	G. Garrison.	Olive, Martin, and Co.	F. Robinson	–	–	High	–	1837	1 year.
6	William Hulbert.	Nashville	107 38	130 0	19 6	4 6	Pittsburg, Pa.	1836	–	Blackston W. Martin.	B. W. Martin	–	–	High	–	1836	2 y'rs.
7	Toledo	Nashville	164 33	162 4	21 3	5 10	New Albany, Indiana.	1837	M. Robinson.	Woods, Stacker, & Co.	John S. Petty	–	–	High	–	1837	1 year.
8	New York	Nashville	105 35	130 0	17 0	5 0	Cincinnati, O.	1835	–	E. W. Burge and Co.	E. W. Burge	T. Harman.	–	High	–	1835	3 y'rs.
9	Lady Jackson	Nashville	120 53	119 7	17 6	6 0	Nashville, T.	1832	–	J. Leake & Co.	J. Leake	–	–	High	–	1832	6 y'rs.
10	Jefferson, (condemned.)	Nashville	77 55	119 7	15 5	4 4	Jefferson, T.	1832	–	J. Maxwell & Co.	J. Maxwell	–	–	High	–	1832	6 y'rs.

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Co.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	Shylock	Nashville	180	00	185	0	22	6	6	0	Smithland, Ken.	1837	G. Garrison.	Davis, Hewitt, & Co.	J. Davis	–	–	–	–	1837	1 year.
14	American	Nashville	165	43	143	0	21	0	6	0	Jeffersonville, Indiana.	1837	–	Connor, Gridly, & Co.	L. Brooks	J. Brooks	–	High	–	1837	1 year.
15	Wm. L. Robeson.	Nashville	486	30	172	0	30	0	10	0	Cincinnati, O.	1835	–	Gibson, Golladay, & Co.	F. P. Wood	Geo. Neeley.	–	High	–	1835	2 y'rs.

REMARKS.

* Steamboat Native, (No. 11,) after having been examined by the inspector, under the late act of Congress, and obtained her certificate, left this port for Smithland, (Ky.) on the 5th day of November, with freight and passengers; and, on her return, collapsed a flue, about 100 miles below this place, by which two lives were lost, and several others on board badly scalded. I have not been able as yet to obtain the facts connected with the occurrence, but am of opinion that it was the result of inattention or carelessness. The same boat collapsed a flue about twelve months ago, by which one life was lost; commanded by the same master, and the engine under the superintendence of the same engineer.

The above, together with the burning of the Randolph, (of which I have already informed you,) are the only accidents which have occurred on boats in this trade for the last ten or fifteen years.

All of which is respectfully submitted.

J. M. SMITH, *Surveyor, &c.*

C.

PORT PONTCHARTRAIN, *December* 8, 1838.

SIR: I received your letter dated 1st November, 1838, this day, (December 8, 1838,) and hasten to make the report according to your order.

Not having been previously informed in regard to my duty in this respect, I hope I may be excused for the neglect. I have particularly examined the several boats trading to this port, and my opinion is in unison with the opinions of the inspectors appointed by the judge authorized to make the appointment of the inspectors for the inspection of the hulls and the boilers of the several steamboats belonging to this port, that they are now in complete requisition according to law, as is expressed in the act of Congress dated the 14th July, 1838, sections 3d, 4th, and 5th.

The names of the boats now employed at this port are as follows, viz: William Wallace, Caroline, Swan, Giraffe, Isabella, and the Mississippi; which last-named boat carries the mail to Covington, on the opposite side of the lake.

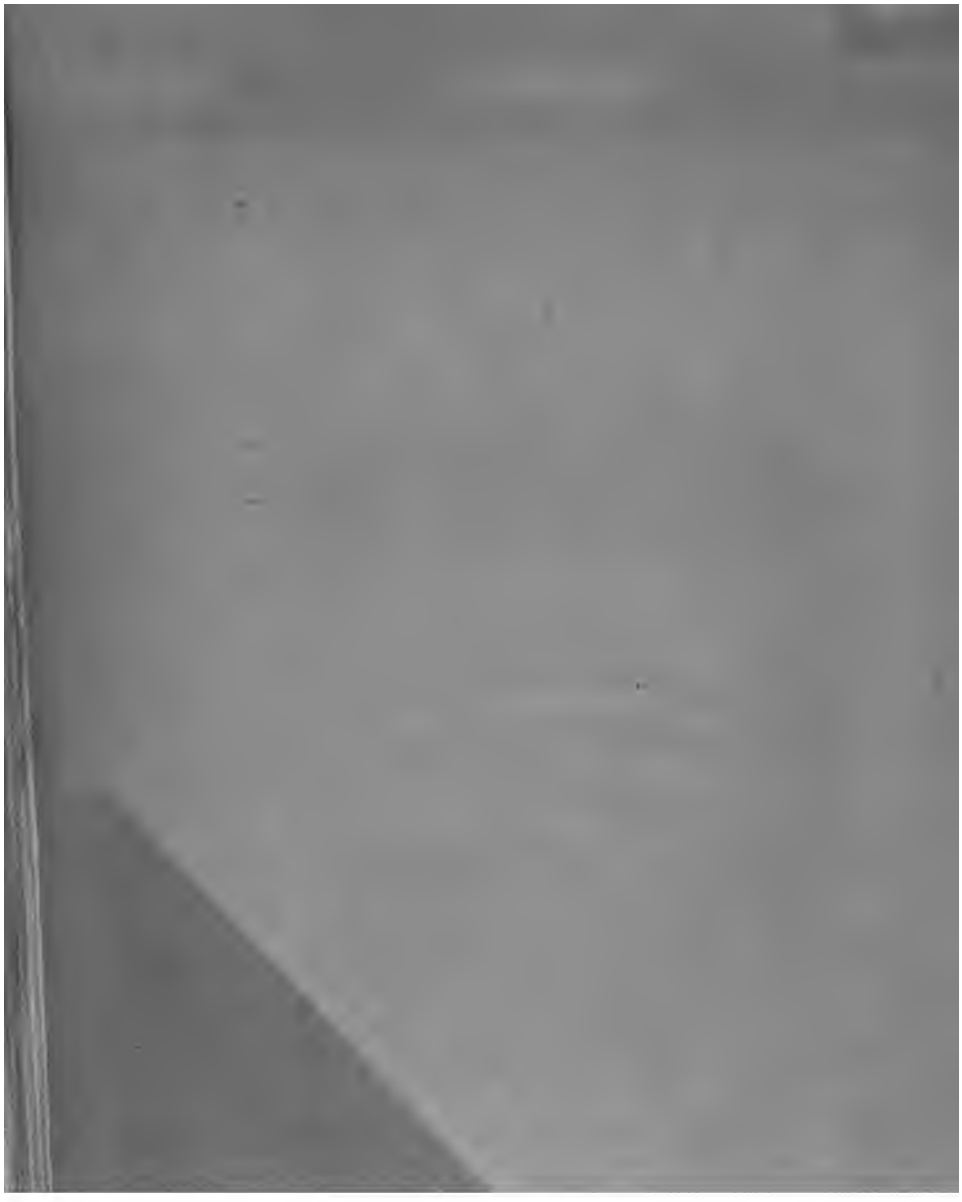
I am, with high regard, sir, your obedient servant,

B. J. SHAW,

Surveyor and Inspector of Port Pontchartrain.

Hon. LEVI WOODBURY,

Secretary of the Treasury.



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